



*From Research to Discovery*

# TNF Superfamily

**Linking autoimmune diseases,  
inflammation and cancer**

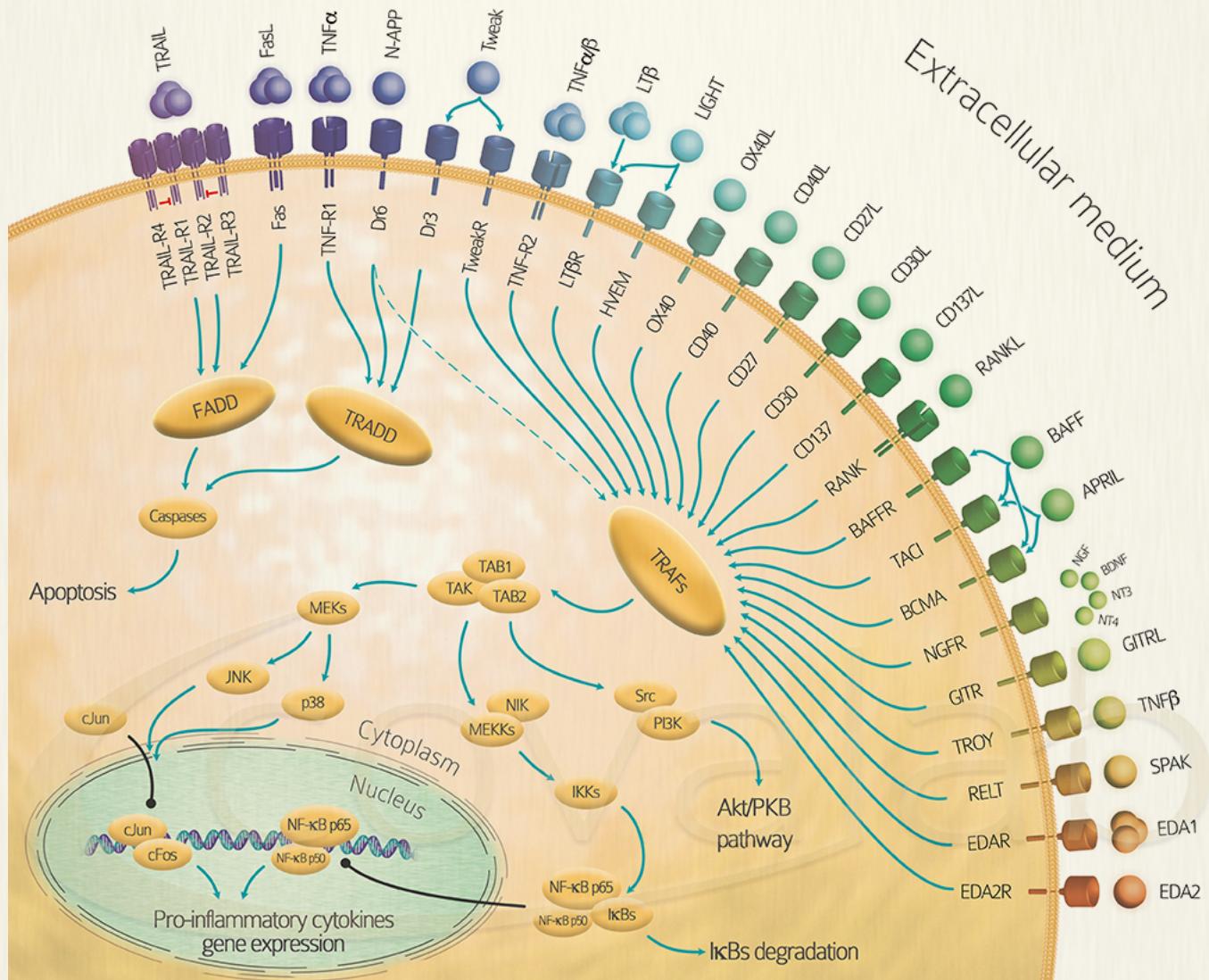
**Tumor necrosis factors-related products from Covalab**

# TNF Superfamily

The tumor necrosis factor (TNF) superfamily (TNFSF) is composed of more than 20 structurally related proteins (ligands) that bind to one or more molecules from the TNF receptor superfamily (TNFRSF), a family of 27 structurally similar receptors. The TNFSF ligands are either membrane-anchored or soluble trimers that cluster their cognate cell surface receptors to initiate signal transduction. The unique structural features of the TNFSF ligands and receptors link these molecules to cell growth, cell survival or cell death, although some molecules can activate both inflammatory and cell death pathways, dependent on target cell types and other extrinsic stimuli.

Many of the TNFRSF molecules are expressed in cells of the immune system, which implies that they may be central to autoimmune and inflammatory diseases as well as cancer. However, their function is not restricted to immune cells. Members of these superfamilies have been linked to an array of pathophysiologies, including cancer, neurologic, cardiovascular, pulmonary, autoimmune and metabolic diseases.

TNFSF and TNFRSF genes have been found to display polymorphisms that are linked to human diseases, which implies that interventions targeting these molecules may be efficacious in treating several health-related problems. Therefore, it is not surprising that several biologics targeting molecules from the TNF or TNFR superfamilies are in ongoing clinical trials for autoimmune and inflammatory diseases and cancer.



**Figure 1:** Simplified overview of the TNF ligands & receptors and downstream signalling pathway.

# TNF Ligands and Receptors interactions

## Ligands

TNF- $\alpha$  (TNF-SF2)  
TNF- $\beta$  (TNF-SF1)

## Receptors

TNF-R1 (TNFR-SF1A)  
TNF-R2 (TNFR-SF1B)  
TROY (TNFR-SF19)

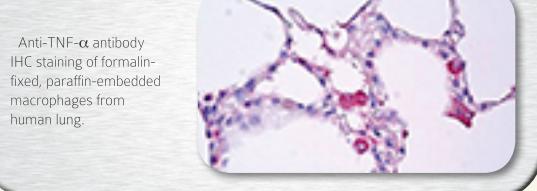
Tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ) is a cytokine involved in systemic inflammation and is a member of a group of cytokines that stimulate the acute phase reaction. TNF- $\beta$ , also known as lymphotoxin  $\alpha$ , is mainly secreted by lymphocytes, forms heterotrimers with lymphotoxin  $\beta$  (LT $\beta$ ), another member of the TNF superfamily, and plays a role in immunological development. Both bind to the receptors TNF-R1 (*CD120a*) and TNF-R2 (*CD120b*), and TNF- $\beta$  has also been shown to interact with TROY.

TNF-R1 is involved in apoptosis triggered via the formation of the death-inducing signalling complex (DISC), and also contributes to the induction of non-cytocidal TNF effects including anti-viral state and activation of the acid sphingomyelinase. TNF-R2 is the high affinity receptor for TNF- $\alpha$ . The TRAF1/TRAF2 complex recruits the apoptotic suppressors BIRC2 and BIRC3 to TNF-R2. This receptor mediates most of the metabolic effects of TNF- $\alpha$ .

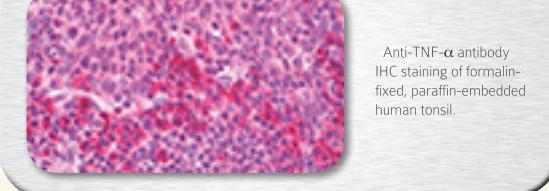
## TNF- $\alpha$ and TNF- $\beta$ antibodies

| ANTIBODY TARGET        | CLONE | HOST   | SPECIES     | APPLICATIONS                | CAT #    |
|------------------------|-------|--------|-------------|-----------------------------|----------|
| TNF- $\alpha$          | 2C8   | Mouse  | Hu          | IHC - P                     | mab71530 |
| TNF- $\alpha$          | B-C7  | Mouse  | Hu          | ELISA, ELISpot, FA, IHC     | mab30211 |
| TNF- $\alpha$ [Biotin] | B-C7  | Mouse  | Hu          | ELISA-D, ELISpot-D          | mab30413 |
| TNF- $\alpha$ [FITC]   | B-D9  | Mouse  | Hu          | FC                          | mab30377 |
| TNF- $\alpha$ [PE]     | B-D9  | Mouse  | Hu          | FC                          | mab30378 |
| TNF- $\alpha$          | B-F7  | Mouse  | Hu          | ELISA-C, ELISpot-C          | mab30281 |
| TNF- $\alpha$          | B-F7  | Mouse  | Hu          | ELISA, ELISpot              | mab30217 |
| TNF- $\alpha$          | M1-C4 | Mouse  | Hu, Rat     | ELISA, IHC - P, WB          | mab71004 |
| TNF- $\alpha$          | MAb1  | Mouse  | Hu          | ELISA, FA, WB               | mab20038 |
| TNF- $\alpha$          | MAb1  | Mouse  | Hu          | ELISA, FA, WB               | mab20424 |
| TNF- $\alpha$          | MAb1  | Mouse  | Hu          | ELISA, IHC - P              | mab71272 |
| TNF- $\alpha$          | MAb11 | Mouse  | Hu, Mk, Po  | ELISA, FA, FC, ICC, IHC - F | mab20425 |
| TNF- $\alpha$ [APC]    | MAb11 | Mouse  | Hu, Mk, Po  | ELISA, FA, FC, ICC, IHC - F | mab21245 |
| TNF- $\alpha$ [FITC]   | MAb11 | Mouse  | Hu, Mk, Po  | ELISA, FA, FC, ICC, IHC - F | mab21246 |
| TNF- $\alpha$ [PE]     | MAb11 | Mouse  | Hu, Mk, Po  | ELISA, FA, FC, ICC, IHC - F | mab21247 |
| TNF- $\alpha$          | -     | Rabbit | Hu          | IHC - P, WB                 | pab75135 |
| TNF- $\beta$ (aa17-66) | -     | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB          | pab77276 |
| TNF- $\beta$ (aa31-80) | -     | Rabbit | Hu, Ms, Rat | IHC - P, WB                 | pab77187 |

TNF- $\alpha$   
mab71530



TNF- $\alpha$   
pab75135

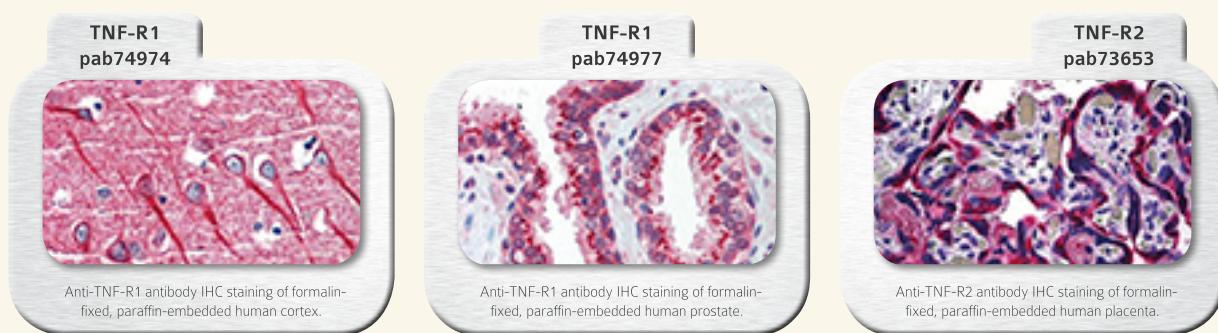


## TROY antibody

| ANTIBODY TARGET | CLONE | HOST   | SPECIES | APPLICATIONS | CAT #    |
|-----------------|-------|--------|---------|--------------|----------|
| TROY (aa29-44)  | -     | Rabbit | Hu, Ms  | IHC - P, WB  | pab74540 |

## TNF-R1 and TNF-R2 antibodies

| ANTIBODY TARGET     | CLONE | HOST   | SPECIES                  | APPLICATIONS    | CAT #    |
|---------------------|-------|--------|--------------------------|-----------------|----------|
| TNF-R1              | H398  | Mouse  | Hu                       | FA, FC, IHC, IP | mab20484 |
| TNF-R1              | H398  | Mouse  | Hu                       | FA, FC, IHC, IP | mab20564 |
| TNF-R1              | -     | Rabbit | Hu, Ms, Rat, D. mel. ... | IHC, WB         | pab60322 |
| TNF-R1              | -     | Rabbit | Hu, Ms, Rat, Rab ...     | IHC - P, WB     | pab74919 |
| TNF-R1              | -     | Rabbit | Hu, Ms, D. mel. ...      | IHC - P, IP, WB | pab74974 |
| TNF-R1 (aa20-43)    | -     | Rabbit | Hu, Ms, Rat, Rab ...     | IHC - P, IP, WB | pab76641 |
| TNF-R1 (aa29-43)    | -     | Rabbit | Hu, D. mel., Ye ...      | IHC, WB         | pab74977 |
| TNF-R2 (C-Terminus) | -     | Rabbit | Hu, Ms, Rat              | IHC - P         | pab73653 |
| TNF-R2 (C-Terminus) | -     | Rabbit | Hu, Ms, Rat              | IHC - P, WB     | pab74856 |



## Related kits

| TARGET                                  | SPECIES | APPLICATIONS | CAT #    |
|---|---------|--------------|----------|
| TNF- $\alpha$ Set                       | Hu      | ELISA        | kit30110 |
| TNF- $\alpha$ Set                       | Rat     | ELISA        | kit30126 |
| TNF- $\alpha$ Kit (pre-coated)          | Hu      | ELISA        | kit30204 |
| TNF- $\alpha$ Kit (pre-coated)          | Rat     | ELISA        | kit30219 |
| TNF- $\alpha$ Kit (pre-coated)          | Ms      | ELISA        | kit30216 |
| TNF- $\alpha$ Pair                      | Hu      | ELISpot      | kit30256 |
| TNF- $\alpha$ Pair                      | Rat     | ELISpot      | kit30260 |
| TNF- $\alpha$ Set (plates not included) | Hu      | ELISpot      | kit30111 |
| TNF- $\alpha$ Set (plates not included) | Rat     | ELISpot      | kit30127 |
| TNF- $\alpha$ Set (non-sterile plates)  | Hu      | ELISpot      | kit30143 |
| TNF- $\alpha$ Set (non-sterile plates)  | Rat     | ELISpot      | kit30147 |
| TNF- $\alpha$ Set (sterile plates)      | Hu      | ELISpot      | kit30112 |
| TNF- $\alpha$ Set (sterile plates)      | Rat     | ELISpot      | kit30128 |
| TNF- $\alpha$ Kit (pre-coated)          | Hu      | ELISpot      | kit30235 |
| TNF- $\alpha$ Kit (pre-coated)          | Rat     | ELISpot      | kit30239 |

## Related proteins

| PROTEIN NAME            | HOST           | SPECIES | CAT #    |
|-------------------------|----------------|---------|----------|
| TNF- $\alpha$ (soluble) | <i>E. coli</i> | Hu, Ms  | pro10238 |
| TNF-R1                  | HEK 293 cells  | Hu, Ms  | pro10333 |

**Ligands**

LT $\beta$  (TNF-SF3)  
LIGHT (TNF-SF14)

**Receptors**

LT $\beta$ R (TNFR-SF3)  
HVEM (TNFR-SF14)  
DcR3 (TNFR-SF6B)

LT $\beta$  (*LTa1b2*) binds to the LT $\beta$ -receptor (LT $\beta$ R), which activates two different NF- $\kappa$ B pathways that lead to distinct patterns of gene induction: the classical NF- $\kappa$ B (RelA/p50) pathway regulates proinflammatory genes expression, while another pathway implying the formation of RelB/p52 complexes activates genes involved in lymphoid organ formation and lymphocyte survival. LIGHT (*CD258*) also binds to LT $\beta$ R and activates NF- $\kappa$ B, which stimulates

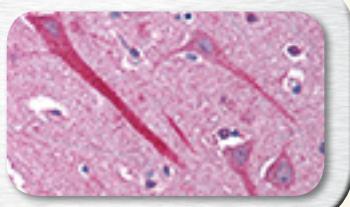
the proliferation of T cells and inhibits growth of the adenocarcinoma HT-29 cells. In addition, this ligand binds to decoy receptor 3 (DcR3) and herpes virus entry mediator (HVEM) (*CD270*). HVEM can act as a molecular switch that modulates T cell activation by transducing either positive signals from LIGHT, or inhibitory signals through another of its ligands, B and T lymphocyte associated (BTLA) (*CD272*), an Ig domain superfamily member.

**Related antibodies**

| ANTIBODY TARGET   | CLONE | HOST   | SPECIES     | APPLICATIONS     | CAT #    |
|-------------------|-------|--------|-------------|------------------|----------|
| BTLA              | 4C2   | Mouse  | Hu          | IHC - P, WB      | mab71873 |
| BTLA              | 2E4   | Mouse  | Hu          | FC, IHC - P, WB  | mab71871 |
| BTLA              | 6F4   | Rat    | Hu          | B/N, ELISA, FC   | mab10166 |
| DcR3 (N-Terminus) | -     | Rabbit | Hu, Ms, Rat | WB               | pab60107 |
| HVEM (C-Terminus) | -     | Rabbit | Hu          | ICC, IHC - P, WB | pab73681 |
| HVEM (C-Terminus) | -     | Rabbit | Hu, Ms      | IF, IHC - P, WB  | pab73682 |
| LT $\beta$ R      | 3C8   | Rat    | Ms          | B/N              | mab10159 |
| LT $\beta$ R      | 3C8   | Rat    | Ms          | B/N              | mab10160 |

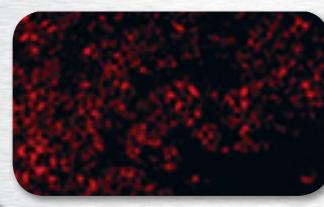
**HVEM**  
pab73681

Anti-HVEM antibody  
IHC staining of formalin-fixed,  
paraffin-embedded  
human cortex.



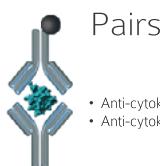
**HVEM**  
pab73682

Anti-HVEM antibody IF  
staining of mouse thymus  
cells.

**Related proteins**

| PROTEIN NAME             | HOST      | SPECIES | CAT #    |
|--------------------------|-----------|---------|----------|
| DcR3                     | CHO cells | Hu      | pro10063 |
| LIGHT (soluble)          | CHO cells | Hu, Ms  | pro10297 |
| LT $\beta$ R (non-lytic) | CHO cells | Hu      | pro10085 |

Customize your assays with our adaptable solutions:

**Pairs**

- Anti-cytokine capture antibody
- Anti-cytokine biotinylated detection antibody

**Sets**

- Anti-cytokine capture antibody
- Anti-cytokine biotinylated detection antibody
- Streptavidin-conjugated alkaline phosphatase
- Enzyme substrate (BCIP/NBT)
- Plates (*upon request*) / Coating solutions

**Kits**

- Anti-cytokine capture antibody
- Anti-cytokine biotinylated detection antibody
- Streptavidin-conjugated alkaline phosphatase
- Enzyme substrate (BCIP/NBT)
- Controls (when available) and buffers
- Pre-coated PVDF-bottomed plates

**Ligand**

OX40L (TNF-SF4)

**Receptor**

OX40 (TNFR-SF4)

OX40L (*CD134L / CD252*) acts as a costimulator through its interaction with OX40 (*CD134*) on T cells, stimulating T cell activation, proliferation and cytokine production. It is expressed on antigen presenting cells including B cells, dendritic cells and mast cells. OX40 has a critical role in the maintenance of the immune response. It was shown to prevent

OX40L from reaching T cell receptors, thus reducing T cell response. Experiments in mice have demonstrated that OX40:Fc can reduce the symptoms associated with the cytokine storm (an immune overreaction) while allowing the immune system to fight off viruses successfully.

## OX40 and OX40L antibodies

| ANTIBODY TARGET    | CLONE     | HOST   | SPECIES     | APPLICATIONS           | CAT #    |
|--------------------|-----------|--------|-------------|------------------------|----------|
| OX40L (C-Terminus) | -         | Rabbit | Hu, Ms, Rat | ELISA, IF, IHC - P, WB | pab76980 |
| OX40L (aa102-131)  | -         | Rabbit | Hu          | IHC - P, WB            | pab77087 |
| OX40               | Ber-ACT35 | Mouse  | Hu, Mk      | ELISA, FC, IHC, IP, WB | mab20064 |
| OX40 [PE]          | Ber-ACT35 | Mouse  | Hu, Mk      | ELISA, FC, IHC, IP, WB | mab20650 |
| OX40               | -         | Rabbit | Hu          | IHC - P, WB            | pab76803 |
| OX40 (N-Terminus)  | -         | Rabbit | Hu          | ELISA, IHC - P, WB     | pab76795 |

## OX40 proteins

| PROTEIN NAME | HOST           | SPECIES | CAT #    |
|--------------|----------------|---------|----------|
| OX40         | HEK 293 cells  | Hu, Ms  | pro10300 |
| OX40         | <i>E. coli</i> | Hu      | pro10090 |

**Ligand**

CD40L (TNF-SF5)

**Receptor**

CD40 (TNFR-SF5)

CD40L (*CD154*) binds to CD40, which is essential in mediating a broad variety of immune and inflammatory responses including T cell-dependent immunoglobulin class switching, memory B cell development and germinal center formation. CD40 is constitutively expressed by

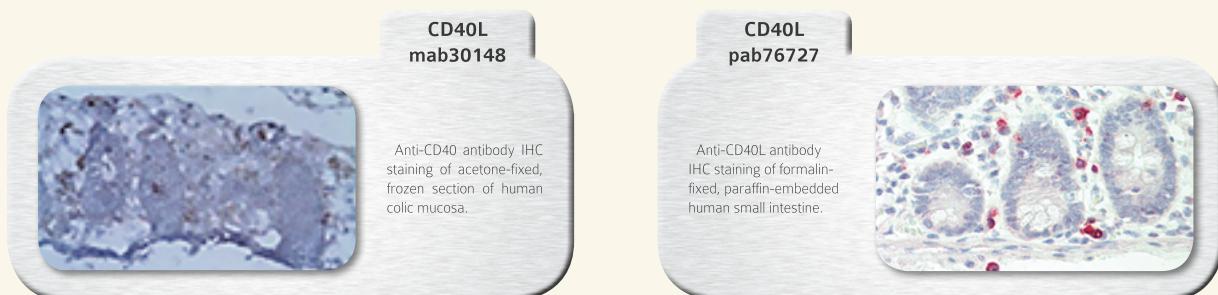
antigen presenting cells, including dendritic cells, B cells and macrophages. Consistent with its widespread expression on normal cells, CD40 is also expressed on a wide range of tumor cells. CD40L levels are increased in serum and in inflamed tissues of patients with autoimmune diseases.

## CD40L antibodies

| ANTIBODY TARGET | CLONE | HOST  | SPECIES | APPLICATIONS | CAT #    |
|-----------------|-------|-------|---------|--------------|----------|
| CD40L           | 24-31 | Mouse | Hu, Mk  | FA, FC, ICC  | mab20565 |
| CD40L           | 24-31 | Mouse | Hu, Mk  | FA, FC, ICC  | mab20489 |
| CD40L [PE]      | 24-31 | Mouse | Hu, Mk  | FA, FC, ICC  | mab20691 |
| CD40L           | B-B29 | Mouse | Hu      | FC           | mab30149 |
| CD40L           | B-B29 | Mouse | Hu      | FC, IHC - F  | mab30148 |
| CD40L [FITC]    | B-B29 | Mouse | Hu      | FC           | mab30342 |
| CD40L [PE]      | B-B29 | Mouse | Hu      | FC           | mab30343 |

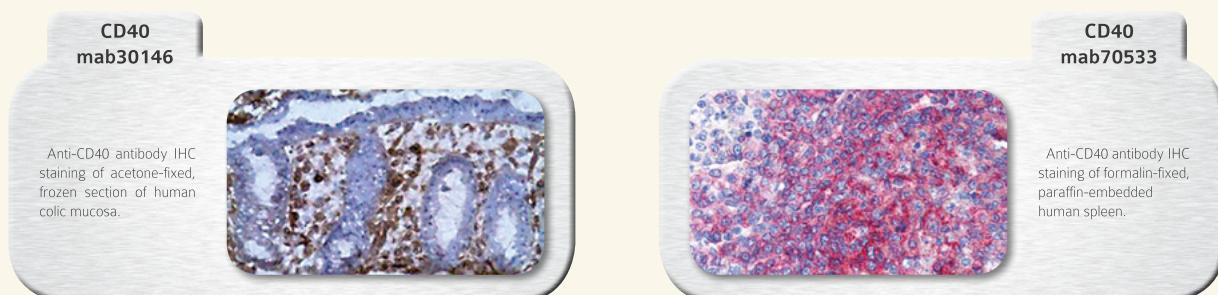
## CD40L antibodies (continued)

| ANTIBODY TARGET    | CLONE | HOST             | SPECIES     | APPLICATIONS         | CAT #    |
|--------------------|-------|------------------|-------------|----------------------|----------|
| CD40L              | MR-1  | Armenian hamster | Ms          | FA, FC, ICC, IHC, IP | mab20540 |
| CD40L              | MR-1  | Armenian hamster | Ms          | FA, FC, ICC, IHC, IP | mab20379 |
| CD40L [FITC]       | MR-1  | Armenian hamster | Ms          | FA, FC, ICC, IHC, IP | mab20690 |
| CD40L (N-Terminus) | -     | Rabbit           | Hu, Ms, Rat | ICC, IHC - P, WB     | pab76727 |



## CD40 antibodies

| ANTIBODY TARGET   | CLONE  | HOST   | SPECIES     | APPLICATIONS           | CAT #    |
|-------------------|--------|--------|-------------|------------------------|----------|
| CD40              | B-B20  | Mouse  | Hu          | FC                     | mab30147 |
| CD40              | B-B20  | Mouse  | Hu          | FA, FC, IHC - F        | mab30146 |
| CD40 [Biotin]     | B-B20  | Mouse  | Hu          | FC                     | mab30341 |
| CD40 [FITC]       | B-B20  | Mouse  | Hu          | FC, IHC, IP            | mab30449 |
| CD40 [PE]         | B-B20  | Mouse  | Hu          | FC                     | mab30450 |
| CD40              | EA-5   | Mouse  | Hu          | ELISA, FA, FC, IHC - P | mab71942 |
| CD40              | FGK45  | Rat    | Ms          | B/N, FC                | mab10078 |
| CD40              | FGK45  | Rat    | Ms          | B/N, FC                | mab10077 |
| CD40              | HB14   | Mouse  | Hu, Mk      | FC, IHC - P            | mab71190 |
| CD40              | HI40a  | Mouse  | Hu          | FC                     | mab20019 |
| CD40 [FITC]       | HI40a  | Mouse  | Hu          | FC                     | mab20914 |
| CD40 [PE]         | HI40a  | Mouse  | Hu          | FC                     | mab20915 |
| CD40 [PerCP]      | HI40a  | Mouse  | Hu          | FC                     | mab20916 |
| CD40              | LOB7/6 | Mouse  | Hu          | FC, IHC, IP            | mab70533 |
| CD40 (C-Terminus) | -      | Rabbit | Hu, Ms, Rat | IHC - P, IP, WB        | pab73633 |



## CD40 and CD40L proteins

| PROTEIN NAME | HOST          | SPECIES | CAT #    |
|--------------|---------------|---------|----------|
| CD40         | HEK 293 cells | Hu, Ms  | pro10342 |
| CD40         | CHO cells     | Hu      | pro10057 |
| CD40L        | CHO cells     | Hu      | pro10058 |

**Ligand**

FasL (TNF-SF6)

**Receptor**

Fas (TNFR-SF6)

FasL (*CD95L / CD178*) binds to Fas (*CD95*), a receptor that transduces the apoptotic signal into cells. It is involved in cytotoxic T cell-mediated apoptosis and in T cell development. The formation of the Fas death-inducing signalling complex (DISC) is the initial step of Fas signalling. Activation of pro caspase-8 at the DISC leads to the induction of death receptor (DR)-mediated apoptosis. Stimulation of Fas has also been

reported to trigger non-apoptotic pathways. It has been shown that membrane-bound FasL is essential for the cytotoxic activity, whereas soluble FasL appears to promote autoimmunity and tumorigenesis via the induction of non-apoptotic pathways, in particular NF- $\kappa$ B. FasL also binds to decoy receptor 3 (DcR3).

## Fas Ligand antibodies

| ANTIBODY TARGET   | CLONE | HOST   | SPECIES     | APPLICATIONS        | CAT #    |
|-------------------|-------|--------|-------------|---------------------|----------|
| FasL              | B-B34 | Mouse  | Hu          | ELISA               | mab30066 |
| FasL              | B-R17 | Mouse  | Hu          | FC, IHC             | mab30058 |
| FasL              | B-R17 | Mouse  | Hu          | FA, FC, ELISA       | mab30057 |
| FasL [Biotin]     | B-R17 | Mouse  | Hu          | FC                  | mab30316 |
| FasL              | NOK-1 | Mouse  | Hu          | FA, FC, ICC, IP, WB | mab20559 |
| FasL              | NOK-1 | Mouse  | Hu          | FA, FC, ICC, IP, WB | mab20473 |
| FasL [PE]         | NOK-1 | Mouse  | Hu          | FA, FC, ICC, IP, WB | mab20719 |
| FasL              | -     | Rabbit | Hu          | IHC - P, WB         | pab73040 |
| FasL (N-Terminus) | -     | Rabbit | Hu, Ms, Rat | IHC - P, WB         | pab75429 |
| FasL (N-Terminus) | -     | Rabbit | Hu, Ms, Rat | IHC - P             | pab72727 |
| FasL (N-Terminus) | -     | Rabbit | Hu, Ms, Rat | IHC, WB             | pab72721 |

## Fas antibodies

| ANTIBODY TARGET  | CLONE   | HOST   | SPECIES              | APPLICATIONS       | CAT #    |
|------------------|---------|--------|----------------------|--------------------|----------|
| Fas              | APO-1-3 | Mouse  | Hu                   | B/N, FC, IP, WB    | mab10171 |
| Fas              | B-D29   | Mouse  | Hu                   | FC                 | mab30055 |
| Fas              | B-D29   | Mouse  | Hu                   | ELISA, FA          | mab30054 |
| Fas              | B-G27   | Mouse  | Hu                   | ELISA, FC, IHC     | mab30053 |
| Fas              | B-G27   | Mouse  | Hu                   | FA, FC, IHC        | mab30052 |
| Fas [FITC]       | B-G27   | Mouse  | Hu                   | FC, IHC            | mab30436 |
| Fas [PE]         | B-G27   | Mouse  | Hu                   | FC                 | mab30437 |
| Fas              | EOS9.1  | Mouse  | Hu                   | FA                 | mab20558 |
| Fas              | EOS9.1  | Mouse  | Hu                   | FA                 | mab20472 |
| Fas              | LT95    | Mouse  | Hu                   | FC, IHC - P        | mab20201 |
| Fas              | LT95    | Mouse  | Hu                   | FC, IHC - P        | mab71224 |
| Fas [APC]        | LT95    | Mouse  | Hu                   | FC, IHC - P        | mab21100 |
| Fas [FITC]       | LT95    | Mouse  | Hu                   | FC, IHC - P        | mab21101 |
| Fas [PE]         | LT95    | Mouse  | Hu                   | FC, IHC - P        | mab21102 |
| Fas              | UT-1    | Mouse  | Hu                   | FA, FC             | mab20018 |
| Fas              | -       | Rabbit | Hu, Ms, Rat          | IHC - P, WB        | pab75064 |
| Fas (N-Terminus) | -       | Rabbit | Ms, Rat              | ICC, IF, IHC, WB   | pab77549 |
| Fas (Internal)   | -       | Goat   | Hu, Ms, Rat, Bov ... | ELISA, IHC - P, WB | pab73134 |
| Fas (C-Terminus) | -       | Rabbit | Hu                   | ELISA, IHC - P, WB | pab74320 |

## Related kits

| TARGET                         | SPECIES | APPLICATIONS | CAT #    |
|--------------------------------|---------|--------------|----------|
| FasL Set                       | Hu      | ELISA        | kit30004 |
| FasL Kit (pre-coated plates)   | Hu      | ELISA        | kit30158 |
| Fas Kit (pre-coated plates)    | Hu      | ELISA        | kit30170 |
| FasL Pair                      | Hu      | ELISpot      | kit30240 |
| FasL Set (plates not included) | Hu      | ELISpot      | kit30005 |
| FasL Set (non-sterile plates)  | Hu      | ELISpot      | kit30129 |
| FasL Set (sterile plates)      | Hu      | ELISpot      | kit30006 |
| FasL Kit (pre-coated plates)   | Hu      | ELISpot      | kit30220 |

## Related proteins

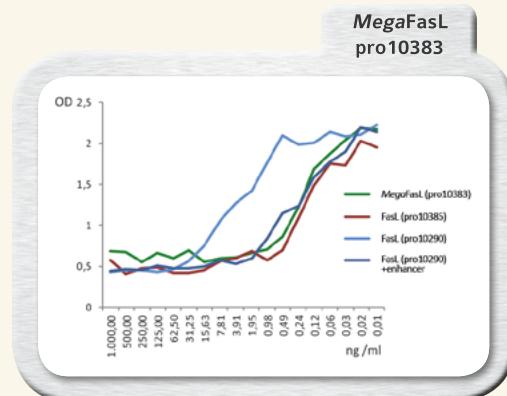
| PROTEIN NAME   | HOST          | SPECIES | CAT #    |
|----------------|---------------|---------|----------|
| Fas            | HEK 293 cells | Hu, Ms  | pro10341 |
| FasL (soluble) | HEK 293 cells | Hu, Ms  | pro10385 |
| FasL (soluble) | HEK 293 cells | Hu, Ms  | pro10290 |

## MegaFasL

MegaLigands are high activity constructs in which two trimeric TNFSF ligands are artificially linked via the oligomeric collagen domain of ACRP30. MegaFasL very effectively stimulates the natural membrane-assisted aggregation of FasL *in vivo*. It can bind to human and mouse Fas to induce apoptosis.

**Figure:** Study of the induction of apoptosis by FasL proteins on Jurkat cells. Cell death was quantified using PMS/MTS assay. MegaFasL induces apoptosis of human Jurkat T cells at a concentration of <1ng/ml).

| PROTEIN NAME       | HOST          | SPECIES | CAT #    |
|--------------------|---------------|---------|----------|
| MegaFasL (soluble) | HEK 293 cells | Hu, Ms  | pro10383 |



## Ligand

### CD27L (TNF-SF7)

## Receptor

### CD27 (TNFR-SF7)

CD27 plays a key role in several immunological pathways such as T-cell differentiation into effector cells, B-cell activation and immunoglobulins synthesis. CD27-deficiency leads to poor immunity against Epstein-Barr

virus and is occasionally fatal. CD27 ligand (*CD70*) is expressed by highly activated lymphocytes while not by normal lymphocytes, and could be a possible target for the treatment of hematopoietic tumors.

## CD27L antibodies

| ANTIBODY TARGET    | CLONE | HOST   | SPECIES | APPLICATIONS | CAT #    |
|--------------------|-------|--------|---------|--------------|----------|
| CD27L              | Ki-24 | Mouse  | Hu      | FC           | mab20066 |
| CD27L [PE]         | Ki-24 | Mouse  | Hu      | FC           | mab21048 |
| CD27L (N-Terminus) | -     | Rabbit | Hu      | IHC - P      | pab70606 |
| CD27L (Internal)   | -     | Rabbit | Hu      | IHC - P      | pab70605 |
| CD27L (Internal)   | -     | Rabbit | Hu      | IHC - P      | pab70604 |

## CD27 antibodies

| ANTIBODY TARGET        | CLONE   | HOST             | SPECIES | APPLICATIONS           | CAT #    |
|------------------------|---------|------------------|---------|------------------------|----------|
| CD27                   | LG.3A10 | Armenian hamster | Hu, Ms  | ELISA, FC, IHC - P, IP | mab71839 |
| CD27                   | LT27    | Mouse            | Hu      | FC                     | mab20159 |
| CD27 [APC]             | LT27    | Mouse            | Hu      | FC                     | mab20810 |
| CD27 [FITC]            | LT27    | Mouse            | Hu      | FC                     | mab20811 |
| CD27 [PE]              | LT27    | Mouse            | Hu      | FC                     | mab20812 |
| CD27 [PE-DyLight™ 594] | LT27    | Mouse            | Hu      | FC                     | mab20813 |

## Ligand

CD30L (TNF-SF8)

## Receptor

CD30 (TNFR-SF8)

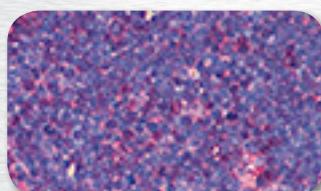
CD30 is expressed by activated T and B lymphocytes. CD30 activation through interaction with its ligands, such as CD30L (*CD153*) and several TNF receptor-associated factors (TRAF), leads to the activation of NF-κB

signalling pathway. Studies have reported a role of CD30 in prevention of autoimmunity by inhibiting the proliferative potential of antigen-specific CD4 T lymphocytes through sequestration of its ligand CD30L.

## CD30 antibodies

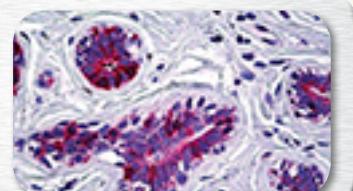
| ANTIBODY TARGET | CLONE   | HOST   | SPECIES | APPLICATIONS | CAT #    |
|-----------------|---------|--------|---------|--------------|----------|
| CD30            | Ber-H8  | Mouse  | Hu      | FC, IHC      | mab20065 |
| CD30 [PE]       | Ber-H8  | Mouse  | Hu      | FC, IHC      | mab20846 |
| CD30            | MEM-268 | Mouse  | Hu      | FC, IHC - P  | mab70503 |
| CD30            | MEM-268 | Mouse  | Hu      | FC, IHC - P  | mab20271 |
| CD30 [APC]      | MEM-268 | Mouse  | Hu      | FC, IHC - P  | mab20844 |
| CD30 [FITC]     | MEM-268 | Mouse  | Hu      | FC, IHC - P  | mab20845 |
| CD30 [PE]       | MEM-268 | Mouse  | Hu      | FC, IHC - P  | mab20847 |
| CD30            | -       | Rabbit | Hu      | IHC - P      | pab73595 |

CD30  
mab70503



Anti-CD30 antibody IHC staining of formalin-fixed, paraffin-embedded human thymus.

CD30  
pab73595



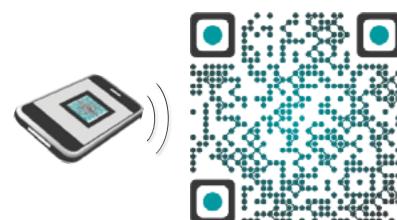
Anti-CD30 antibody IHC staining of formalin-fixed, paraffin-embedded human breast.

Scan me

to learn more about the TNF Superfamily!



Download i-nigma QRcode scanner: <http://www.i-nigma.mobi>



**Ligand**

CD137L (TNF-SF9)

**Receptor**

CD137 (TNFR-SF9)

CD137L (*4-1BBL*) is expressed on activated macrophages, dendritic cells and mature B cells. This ligand and its receptor CD137 (*4-1BB*) have been reported to be involved in tumor rejection, apoptosis, anti-viral immunity, diabetes, T and B cell co-stimulation and modulation of the

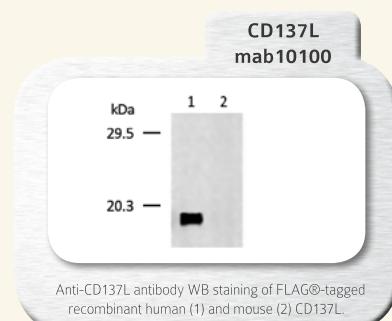
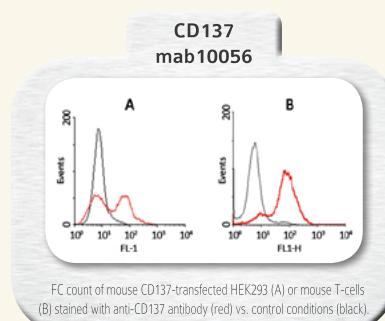
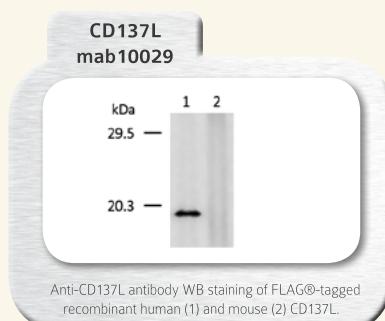
immune response. Crosslinking of CD137 enhances T cell proliferation, IL-2 secretion, cytolytic activity and survival. In addition, CD137 was shown to enhance immune activity to eliminate tumors in mice.

## CD137L antibodies

| ANTIBODY TARGET | CLONE  | HOST   | SPECIES | APPLICATIONS  | CAT #    |
|-----------------|--------|--------|---------|---------------|----------|
| CD137L          | 41B436 | Mouse  | Hu      | ELISA, FC, WB | mab10029 |
| CD137L          | 41B446 | Mouse  | Hu      | FC, WB        | mab10100 |
| CD137L          | -      | Rabbit | Hu      | IHC - P, WB   | pab75144 |

## CD137 antibodies

| ANTIBODY TARGET | CLONE | HOST   | SPECIES | APPLICATIONS      | CAT #    |
|-----------------|-------|--------|---------|-------------------|----------|
| CD137           | 4B4-1 | Mouse  | Hu, Mk  | ELISA, FA, FC, IP | mab20501 |
| CD137           | 4B4-1 | Mouse  | Hu, Mk  | ELISA, FA, FC, IP | mab20062 |
| CD137 [PE]      | 4B4-1 | Mouse  | Hu, Mk  | ELISA, FA, FC, IP | mab20653 |
| CD137           | M4173 | Rat    | Ms      | FC, WB            | mab10056 |
| CD137           | M4202 | Rat    | Ms      | FC                | mab10099 |
| CD137           | -     | Rabbit | Hu      | FC, WB            | pab10033 |
| CD137           | -     | Rat    | Ms      | FC, WB            | pab10107 |



## Related proteins

| PROTEIN NAME     | HOST           | SPECIES | CAT #    |
|------------------|----------------|---------|----------|
| CD137            | HEK 293 cells  | Hu      | pro10325 |
| CD137            | HEK 293 cells  | Ms      | pro10268 |
| CD137            | <i>E. coli</i> | Hu      | pro10091 |
| CD137L (soluble) | HEK 293 cells  | Hu      | pro10289 |
| CD137L (soluble) | HEK 293 cells  | Ms      | pro10264 |

**Ligand**

TRAIL (TNF-SF10)

**Receptors**

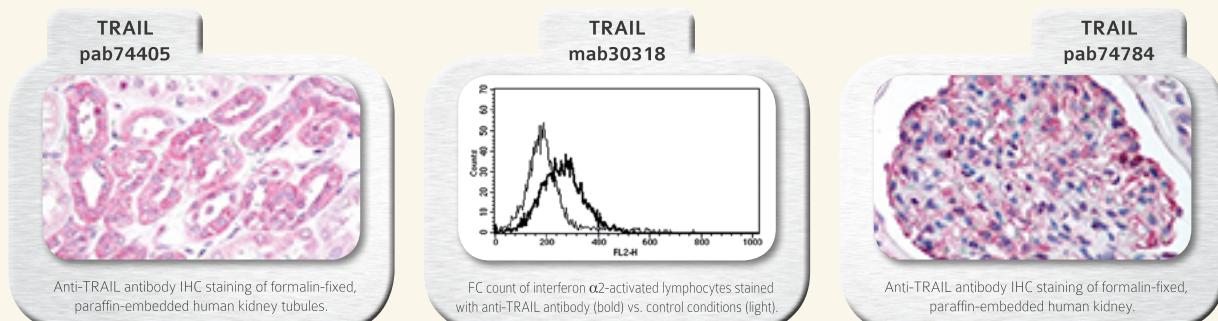
TRAIL-R1 (TNFR-SF10A)  
 TRAIL-R2 (TNFR-SF10B)  
 TRAIL-R3 (TNFR-SF10C)  
 TRAIL-R4 (TNFR-SF10D)

Active TNF-related apoptosis-inducing ligand (TRAIL) (*Apo2L / CD253*) forms trimers and specifically binds to five distinct receptors: TRAIL-R1 (*DR4 / CD261*), -R2 (*DR5 / CD262*), -R3 (*DcR1 / CD263*), -R4 (*DcR2 / CD264*) and osteoprotegerin (OPG). Trimerised TRAIL triggers apoptosis upon ligation of cell surface TRAIL-R1 and/or TRAIL-R2 by inducing the formation of the so-called multiprotein death-inducing signalling

complex (DISC). Aside their apoptotic effect and their importance for cancer regulation, TRAIL and TRAIL-Rs seem to be involved in different pathways and regulatory functions such as non-apoptotic, mitogenic and prosurvival pathways. They were also shown to be involved in bone turnover regulation and angiogenesis.

## TRAIL antibodies

| ANTIBODY TARGET    | CLONE | HOST   | SPECIES | APPLICATIONS           | CAT #    |
|--------------------|-------|--------|---------|------------------------|----------|
| TRAIL              | 2E5   | Mouse  | Hu      | FA, FC                 | mab20512 |
| TRAIL              | 2E5   | Mouse  | Hu      | FA, FC                 | mab20164 |
| TRAIL              | 2E5   | Mouse  | Hu      | FA, FC                 | mab20012 |
| TRAIL [PE]         | 2E5   | Mouse  | Hu      | FA, FC                 | mab21149 |
| TRAIL              | B-S23 | Mouse  | Hu      | FC                     | mab30060 |
| TRAIL              | B-S23 | Mouse  | Hu      | ELISA, FA, FC          | mab30059 |
| TRAIL              | B-S23 | Mouse  | Hu      | ELISA-C, ELISpot-C     | mab30290 |
| TRAIL [Biotin]     | B-S23 | Mouse  | Hu      | FC                     | mab30318 |
| TRAIL [PE]         | B-S23 | Mouse  | Hu      | FC                     | mab30317 |
| TRAIL              | B-T24 | Mouse  | Hu      | ELISA, FA, FC          | mab30061 |
| TRAIL [Biotin]     | B-T24 | Mouse  | Hu      | ELISA-D, ELISpot-D     | mab30422 |
| TRAIL              | HS501 | Mouse  | Hu      | WB                     | mab10144 |
| TRAIL              | -     | Rabbit | Hu      | WB                     | pab52051 |
| TRAIL              | -     | Rabbit | Hu      | WB                     | pab52052 |
| TRAIL              | -     | Rabbit | Hu      | FC, ICC, IHC, WB       | pab74784 |
| TRAIL (Internal)   | -     | Rabbit | Hu      | ELISA, IF, IHC - P, WB | pab74405 |
| TRAIL (C-Terminus) | -     | Rabbit | Hu      | IHC, WB                | pab60330 |



## TRAIL-R1 antibodies

| ANTIBODY TARGET | CLONE   | HOST  | SPECIES | APPLICATIONS    | CAT #    |
|-----------------|---------|-------|---------|-----------------|----------|
| TRAIL-R1        | 32A1380 | Mouse | Hu      | FC, IHC - P, WB | mab70180 |
| TRAIL-R1        | 32A242  | Mouse | Hu      | IHC - P, WB     | mab70181 |
| TRAIL-R1        | B-N28   | Mouse | Hu      | IP, WB          | mab30050 |
| TRAIL-R1        | B-N36   | Mouse | Hu      | FC              | mab30185 |

## TRAIL-R1 antibodies (continued)

| ANTIBODY TARGET       | CLONE   | HOST   | SPECIES | APPLICATIONS     | CAT #    |
|-----------------------|---------|--------|---------|------------------|----------|
| TRAIL-R1              | B-N36   | Mouse  | Hu      | ELISA, FA, FC    | mab30184 |
| TRAIL-R1 [PE]         | B-N36   | Mouse  | Hu      | FC               | mab30358 |
| TRAIL-R1              | B-T35   | Mouse  | Hu      | ELISA            | mab30093 |
| TRAIL-R1              | DR-4-02 | Mouse  | Hu      | FA, FC, ICC, IP  | mab20518 |
| TRAIL-R1              | DR-4-02 | Mouse  | Hu      | FA, FC, ICC, IP  | mab20239 |
| TRAIL-R1 [APC]        | DR-4-02 | Mouse  | Hu      | FA, FC, ICC, IP  | mab21248 |
| TRAIL-R1 [FITC]       | DR-4-02 | Mouse  | Hu      | FA, FC, ICC, IP  | mab21249 |
| TRAIL-R1 [PE]         | DR-4-02 | Mouse  | Hu      | FA, FC, ICC, IP  | mab21250 |
| TRAIL-R1              | HS101   | Mouse  | Hu      | B/N, FC, ICC, IP | mab10131 |
| TRAIL-R1              | HS101   | Mouse  | Hu      | B/N, FC, ICC, IP | mab10130 |
| TRAIL-R1 [Biotin]     | HS101   | Mouse  | Hu      | B/N, FC, ICC, IP | mab10132 |
| TRAIL-R1 [ATTO 488]   | HS101   | Mouse  | Hu      | FC, ICC          | mab10134 |
| TRAIL-R1 [ATTO 647N]  | HS101   | Mouse  | Hu      | FC, ICC          | mab10135 |
| TRAIL-R1 [FITC]       | HS101   | Mouse  | Hu      | FC, ICC          | mab10133 |
| TRAIL-R1              | TR1.02  | Mouse  | Hu      | FC, IHC, WB      | mab10145 |
| TRAIL-R1              | -       | Rabbit | Hu      | IHC - P, WB      | pab75414 |
| TRAIL-R1 (N-Terminus) | -       | Rabbit | Hu      | WB               | pab60121 |
| TRAIL-R1 (C-Terminus) | -       | Rabbit | Hu      | WB               | pab60120 |



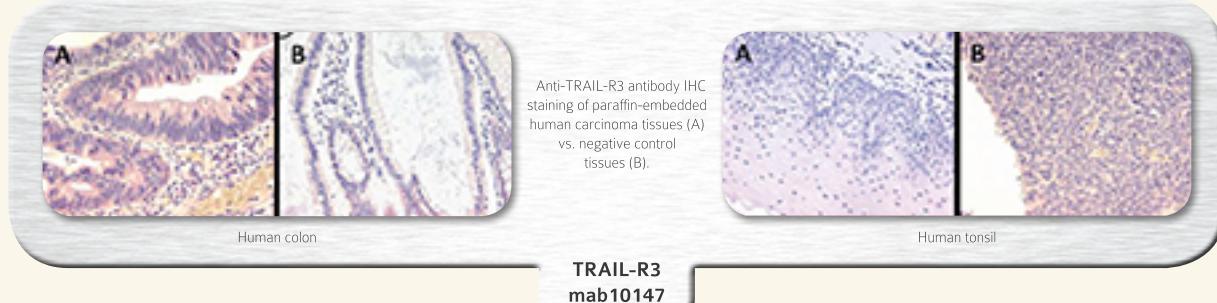
## TRAIL-R2 antibodies

| ANTIBODY TARGET       | CLONE    | HOST   | SPECIES | APPLICATIONS         | CAT #    |
|-----------------------|----------|--------|---------|----------------------|----------|
| TRAIL-R2              | B-D37    | Mouse  | Hu      | ELISA, FA, FC, IP    | mab30188 |
| TRAIL-R2              | B-K29    | Mouse  | Hu      | FC                   | mab30187 |
| TRAIL-R2              | B-K29    | Mouse  | Hu      | ELISA, FA, FC        | mab30186 |
| TRAIL-R2 [PE]         | B-K29    | Mouse  | Hu      | FC                   | mab30359 |
| TRAIL-R2              | DR5-01-1 | Mouse  | Hu      | FC                   | mab20277 |
| TRAIL-R2 [FITC]       | DR5-01-1 | Mouse  | Hu      | FC                   | mab21251 |
| TRAIL-R2 [PE]         | DR5-01-1 | Mouse  | Hu      | FC                   | mab21252 |
| TRAIL-R2              | HS201    | Mouse  | Hu      | B/N, FC, ICC, IP     | mab10137 |
| TRAIL-R2              | HS201    | Mouse  | Hu      | B/N, FC, ICC, IP     | mab10136 |
| TRAIL-R2 [Biotin]     | HS201    | Mouse  | Hu      | B/N, FC, ICC, IP     | mab10138 |
| TRAIL-R2 [ATTO 488]   | HS201    | Mouse  | Hu      | FC, ICC              | mab10140 |
| TRAIL-R2 [ATTO 647N]  | HS201    | Mouse  | Hu      | FC, ICC              | mab10141 |
| TRAIL-R2 [FITC]       | HS201    | Mouse  | Hu      | FC, ICC              | mab10139 |
| TRAIL-R2              | TR2.21   | Mouse  | Hu      | FC, IHC, WB          | mab10146 |
| TRAIL-R2              | -        | Rabbit | Hu      | WB                   | pab60122 |
| TRAIL-R2 (C-Terminus) | -        | Rabbit | Hu, Ms  | ICC, IHC - P, WB     | pab70804 |
| TRAIL-R2 (aa380-398)  | -        | Rabbit | Hu      | IHC - P, WB          | pab70803 |
| TRAIL-R2 (aa388-407)  | -        | Rabbit | Hu      | FC, ICC, IHC - P, WB | pab74538 |



### TRAIL-R3 antibodies

| ANTIBODY TARGET                 | CLONE       | HOST   | SPECIES     | APPLICATIONS | CAT #    |
|---------------------------------|-------------|--------|-------------|--------------|----------|
| TRAIL-R3                        | B-D44       | Mouse  | Hu          | FA           | mab30189 |
| TRAIL-R3                        | B-D44       | Mouse  | Hu          | FC           | mab30190 |
| TRAIL-R3 [PE]                   | B-D44       | Mouse  | Hu          | FC           | mab30360 |
| TRAIL-R3                        | B-H47       | Mouse  | Hu          | ELISA, WB    | mab30051 |
| TRAIL-R3                        | B-N29       | Mouse  | Hu          | ELISA        | mab30079 |
| TRAIL-R3                        | HS301       | Mouse  | Hu          | FC, ICC      | mab10142 |
| TRAIL-R3                        | TR3.06      | Mouse  | Hu          | FC, IHC, WB  | mab10147 |
| TRAIL-R3                        | TRAIL-R3-02 | Mouse  | Hu          | FC           | mab20025 |
| TRAIL-R3 [FITC]                 | TRAIL-R3-02 | Mouse  | Hu          | FC           | mab21253 |
| TRAIL-R3 [PE]                   | TRAIL-R3-02 | Mouse  | Hu          | FC           | mab21254 |
| TRAIL-R3 (Extracellular Domain) | -           | Rabbit | Hu, Ms, Rat | WB           | pab60104 |
| TRAIL-R3 (Extracellular Domain) | -           | Rabbit | Hu, Ms, Rat | WB           | pab60105 |



### TRAIL-R4 antibodies

| ANTIBODY TARGET | CLONE       | HOST   | SPECIES | APPLICATIONS     | CAT #    |
|-----------------|-------------|--------|---------|------------------|----------|
| TRAIL-R4        | B-L34       | Mouse  | Hu      | ELISA            | mab30074 |
| TRAIL-R4        | B-P30       | Mouse  | Hu      | IP, WB           | mab30063 |
| TRAIL-R4        | B-R27       | Mouse  | Hu      | FC               | mab30199 |
| TRAIL-R4 [PE]   | B-R27       | Mouse  | Hu      | FC               | mab30367 |
| TRAIL-R4        | B-T32       | Mouse  | Hu      | ELISA            | mab30092 |
| TRAIL-R4        | HS402       | Mouse  | Hu      | FC, ICC, IHC, IP | mab10143 |
| TRAIL-R4        | TRAIL-R4-01 | Mouse  | Hu      | FC               | mab20026 |
| TRAIL-R4 [FITC] | TRAIL-R4-01 | Mouse  | Hu      | FC               | mab21255 |
| TRAIL-R4 [PE]   | TRAIL-R4-01 | Mouse  | Hu      | FC               | mab21256 |
| TRAIL-R4        | -           | Rabbit | Hu      | WB               | pab60106 |
| TRAIL-R4        | -           | Rabbit | Hu      | WB               | pab51052 |

## TRAIL-related proteins



| PROTEIN NAME    | HOST           | SPECIES | CAT #    |
|-----------------|----------------|---------|----------|
| TRAIL (soluble) | <i>E. coli</i> | Hu, Ms  | pro10292 |
| TRAIL-R1        | HEK 293 cells  | Hu, Ms  | pro10331 |
| TRAIL-R2        | HEK 293 cells  | Hu, Ms  | pro10332 |
| Decoy TRAIL-R2  | HEK 293 cells  | Hu, Ms  | pro10351 |

### KillerTRAIL and SuperKillerTRAIL

*KillerTRAIL* and *SuperKillerTRAIL* are oligomerised TRAIL proteins which do not require a cross-linking enhancer for their potent biological activity.

| PROTEIN NAME                               | HOST           | SPECIES | CAT #    |
|--|----------------|---------|----------|
| <i>KillerTRAIL</i> (soluble)               | <i>E. coli</i> | Hu, Ms  | pro10395 |
| <i>KillerTRAIL</i> (R1 specific) (soluble) | <i>E. coli</i> | Hu      | pro10397 |
| <i>SuperKillerTRAIL</i> (soluble)          | <i>E. coli</i> | Hu      | pro10396 |
| <i>SuperKillerTRAIL</i> (soluble)          | <i>E. coli</i> | Hu, Ms  | pro10398 |

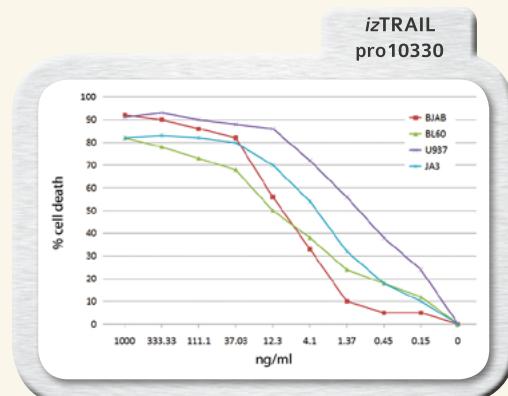


### izTRAIL

*izTRAIL* is a highly active, oligomerised form of soluble human TRAIL. Due to a N-terminal isoleucine zipper (*iz*) motif, the intrinsic trimerisation of TRAIL, required for its apoptosis-inducing activity, is enhanced when compared to non-tagged soluble human TRAIL (*shTRAIL*). Therefore, *izTRAIL* is a potent inducer of apoptosis in many human cancer cells, but not in normal human hepatocytes. In addition, the half-life of *izTRAIL* is about 8-fold higher than the half-life of *shTRAIL*.

These properties render *izTRAIL* highly suitable for both *in vitro* and *in vivo* use, particularly for studies in which investigators plan to transfer their *in vitro* results into an *in vivo* system.

| PROTEIN NAME             | HOST           | SPECIES | CAT #    |
|--------------------------|----------------|---------|----------|
| <i>izTRAIL</i> (soluble) | <i>E. coli</i> | Hu, Ms  | pro10330 |



## TRAIL-related kits

| TARGET                    | SPECIES | APPLICATIONS | CAT #    |
|---------------------------|---------|--------------|----------|
| TRAIL Kit (pre-coated)    | Hu      | ELISA        | kit30205 |
| TRAIL-R1 Kit (pre-coated) | Hu      | ELISA        | kit30206 |
| TRAIL-R2 Kit (pre-coated) | Hu      | ELISA        | kit30207 |
| TRAIL-R3 Kit (pre-coated) | Hu      | ELISA        | kit30208 |
| TRAIL-R4 Kit (pre-coated) | Hu      | ELISA        | kit30209 |

**Ligand**

RANKL (TNF-SF11)

**Receptors**

RANK (TNFR-SF11)

OPG (TNFR-SF11B)

RANKL (*CD254*) is an osteoclast differentiation and activation factor and is involved in osteoclastogenesis, binding to RANK (*CD265*). It increases the ability of dendritic cells to stimulate naive T-cell proliferation. It is an important regulator of interactions between T-cells and dendritic cells and is involved in the regulation of the T-cell-dependent immune

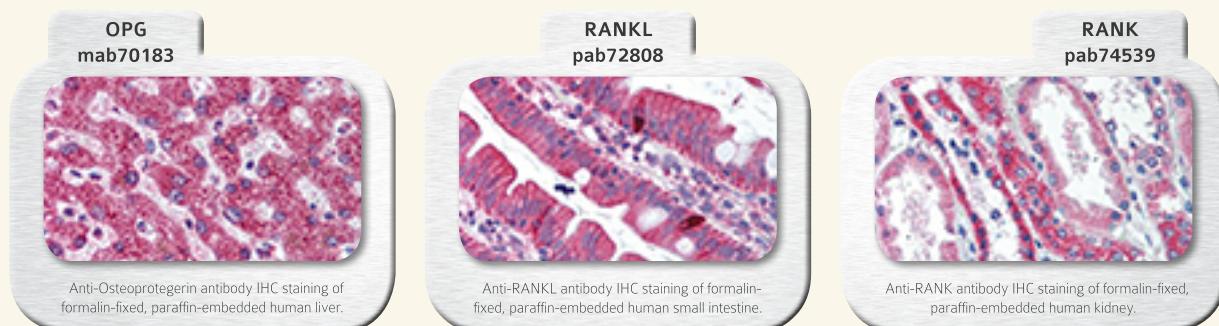
response. RANKL also plays an important role in the progression of breast cancer. Osteoprotegerin (OPG) is another receptor of RANK ligand produced by osteoblasts. It links to RANK to prevent RANK/RANKL-induced activation of osteoclasts.

## RANKL and OPG antibodies

| ANTIBODY TARGET           | CLONE   | HOST   | SPECIES     | APPLICATIONS       | CAT #    |
|---------------------------|---------|--------|-------------|--------------------|----------|
| Osteoprotegerin (aa20-37) | 98A1071 | Mouse  | Hu          | IHC - P, WB        | mab70183 |
| Osteoprotegerin           | -       | Rabbit | Hu          | ELISA, IHC - P, WB | pab75046 |
| Osteoprotegerin (aa1-50)  | -       | Rabbit | Hu, Ms, Rat | IF, IHC - P, WB    | pab76703 |
| RANKL                     | -       | Rabbit | Hu          | ELISA, FC, WB      | pab10031 |
| RANKL (Internal)          | -       | Rabbit | Hu, Ms, Rat | IHC - P, WB        | pab72808 |

## RANK antibodies

| ANTIBODY TARGET   | CLONE | HOST   | SPECIES | APPLICATIONS    | CAT #    |
|-------------------|-------|--------|---------|-----------------|----------|
| RANK (ectodomain) | -     | Rabbit | Hu      | FC, WB          | pab10036 |
| RANK (aa326-616)  | 9A725 | Mouse  | Hu, Ms  | FC, IHC - P, WB | mab70182 |
| RANK (aa603-613)  | -     | Rabbit | Hu, Ms  | IHC - P, WB     | pab74539 |



## Related proteins

| PROTEIN NAME    | HOST          | SPECIES | CAT #    |
|-----------------|---------------|---------|----------|
| RANKL (soluble) | HEK 293 cells | Ms      | pro10324 |
| RANKL (soluble) | HEK 293 cells | Hu, Ms  | pro10296 |
| RANK            | HEK 293 cells | Hu, Ms  | pro10303 |
| RANK            | HEK 293 cells | Hu, Ms  | pro10349 |

Custom peptide synthesis  
<http://www.covalab.com/peptide-synthesis>

**Ligand**

TWEAK (TNF-SF12)

**Receptors**

TWEAKR (TNFR-SF12)

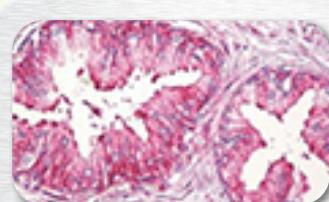
DR3 (TNFR-SF25)

Tumor necrosis factor-like weak inducer of apoptosis (TWEAK) and its receptor TWEAKR (*Fn14*) are mainly expressed by monocytes, dendritic cells and natural killer cells. Their associated cascade signalling pathway is involved in multiple tissue-specific diseases such as retina, liver and kidney, both in mouse and human.

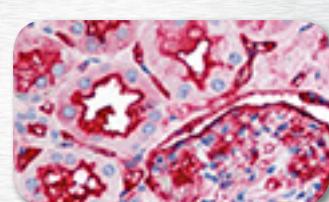
Lower soluble TWEAK(sTWEAK) concentrations have been independently associated with the presence of non-alcoholic fatty liver disease. Studies have demonstrated that a reduction of serum circulating sTWEAK concentrations are associated with the presence of liver steatosis, for administration of sTWEAK reduces fat accumulation in human hepatocytes.

## TWEAK and TWEAKR antibodies

| ANTIBODY TARGET  | CLONE  | HOST   | SPECIES | APPLICATIONS           | CAT #    |
|------------------|--------|--------|---------|------------------------|----------|
| TWEAK            | CARL-1 | Mouse  | Hu      | FA, FC, IHC            | mab20475 |
| TWEAK            | CARL-1 | Mouse  | Hu      | FA, FC, IHC            | mab20561 |
| TWEAK [PE]       | CARL-1 | Mouse  | Hu      | FA, FC, IHC            | mab20805 |
| TWEAK (Internal) | -      | Rabbit | Hu, Ms  | ELISA, IF, IHC - P, WB | pab74107 |
| TWEAK (Pro73)    | -      | Rabbit | Hu, Ms  | IF, IHC, WB            | pab77079 |
| TWEAKR           | ITEM-4 | Mouse  | Hu, Ms  | FA, FC, IHC - F, WB    | mab20474 |
| TWEAKR           | ITEM-4 | Mouse  | Hu, Ms  | FA, FC, IHC - F, WB    | mab20560 |
| TWEAKR [PE]      | ITEM-4 | Mouse  | Hu, Ms  | FA, FC, IHC - F, WB    | mab20809 |
| TWEAKR           | -      | Rabbit | Hu      | IHC - P, WB            | pab75036 |

TWEAK  
pab74107

Anti-TWEAK antibody  
IHC staining of formalin-fixed, paraffin-embedded human prostate.

TWEAKR  
pab75036

Anti-TWEAKR antibody  
IHC staining of formalin-fixed, paraffin-embedded human kidney.

## DR3 antibodies

| ANTIBODY TARGET            | CLONE | HOST   | SPECIES     | APPLICATIONS            | CAT #    |
|----------------------------|-------|--------|-------------|-------------------------|----------|
| DR3                        | JD3   | Mouse  | Hu          | FC                      | mab20476 |
| DR3 [PE]                   | JD3   | Mouse  | Hu          | FC                      | mab21127 |
| DR3                        | -     | Rabbit | Hu          | IHC - P, WB             | pab73340 |
| DR3                        | -     | Rabbit | Hu, Ms, Rat | IHC - P, WB             | pab74399 |
| DR3 (N-Terminus)           | -     | Rabbit | Hu          | WB                      | pab60119 |
| DR3 (extracellular domain) | -     | Rabbit | Hu, Ms      | ELISA, ICC, IHC - P, WB | pab75390 |
| DR3 (extracellular domain) | -     | Rabbit | Hu          | ICC, WB                 | pab60118 |
| DR3 (C-Terminus)           | -     | Rabbit | Hu          | WB                      | pab60117 |
| DR3 (aa25-40)              | -     | Rabbit | Hu, Ms      | ELISA, IHC - P, WB      | pab75389 |

## Related proteins

| PROTEIN NAME | HOST          | SPECIES | CAT #    |
|--------------|---------------|---------|----------|
| TWEAKR       | HEK 293 cells | Hu, Ms  | pro10315 |

**Ligands**

APRIL (TNF-SF13)

BAFF (TNF-SF13B)

**Receptors**

TACI (TNFR-SF13B)

BAFF-R (TNFR-SF13C)

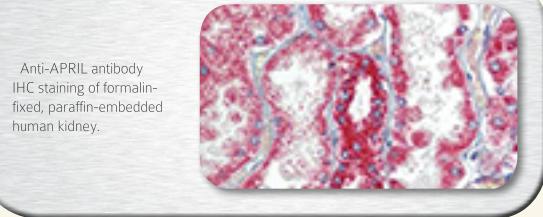
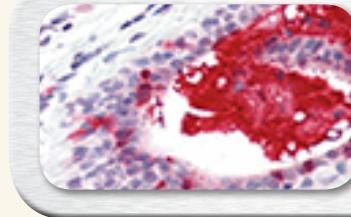
BCMA (TNFR-SF17)

BAFF (*CD257*) is mainly produced by innate immune cells such as neutrophils, monocytes, macrophages, but also by T cells, activated B cells, some malignant B cells and non-lymphoid cells. BAFF binds three distinct receptors: BAFF-R (*CD268*), TACI (*CD267*) and BCMA (*CD269*), expressed predominantly on B cells. BAFF is a master regulator of peripheral B cell survival, and together with IL-6, promotes Ig class-switching and plasma cells differentiation. BAFF also co-stimulates activated T cells. Elevated levels of soluble BAFF have been detected in the serum of patients with various autoimmune diseases. BAFF has also increased levels in some lymphoid cancers.

APRIL (*CD256*) is a cytokine that belongs to the TNF superfamily and binds to TACI and BCMA. It also interacts with heparan sulfate proteoglycans that induce APRIL oligomerisation, which is a prerequisite for the triggering of its effects on BCMA or TACI. It is implicated in the regulation of tumor cell growth and is involved in monocyte/macrophage-mediated immunological processes. APRIL produced by neutrophils sustains local antibody production by creating plasma cell niches in mucosa-associated lymphoid tissue (MALT).

**APRIL antibodies**

| ANTIBODY TARGET                | CLONE | HOST   | SPECIES              | APPLICATIONS           | CAT #    |
|--------------------------------|-------|--------|----------------------|------------------------|----------|
| APRIL (Extracellular domain)   | -     | Rabbit | Hu, Ms               | ELISA, IHC - P, WB     | pab70335 |
| APRIL (Extracellular domain)   | -     | Rabbit | Hu                   | WB                     | pab60024 |
| APRIL (Extracellular domain 2) | -     | Rabbit | Hu, D. mel.          | IHC - P, WB            | pab60023 |
| APRIL (Internal)               | -     | Rabbit | Hu, Ms, Rat          | ELISA, IF, IHC - P, WB | pab74356 |
| APRIL (Internal)               | -     | Rabbit | Hu                   | ELISA, IHC - P, WB     | pab70336 |
| APRIL (C-Terminus)             | -     | Goat   | Hu, Ms, Rat, Mk ...  | ELISA, IHC - P, WB     | pab76089 |
| APRIL (C-Terminus)             | -     | Goat   | Hu, Ms, Rat, Bov, Ca | IHC - P                | pab73028 |
| APRIL (aa1-17)                 | -     | Rabbit | Hu                   | IHC - P, WB            | pab74541 |

APRIL  
pab73028APRIL  
pab70336**BAFF antibodies**

| ANTIBODY TARGET   | CLONE  | HOST   | SPECIES     | APPLICATIONS       | CAT #    |
|-------------------|--------|--------|-------------|--------------------|----------|
| BAFF              | 1-35-1 | Rat    | Hu          | FC                 | mab10155 |
| BAFF              | 2.81   | Rat    | Hu          | ELISA, IP          | mab10129 |
| BAFF              | 4.62   | Rat    | Hu          | B/N, ELISA, IP     | mab10127 |
| BAFF [Biotin]     | 4.62   | Rat    | Hu          | B/N, ELISA, IP     | mab10128 |
| BAFF              | T7-241 | Mouse  | Hu          | ELISA, FC, IHC - P | mab71183 |
| BAFF              | -      | Mouse  | Hu          | ELISA, IHC - P, WB | mab71588 |
| BAFF (C-Terminus) | -      | Rabbit | Hu, Ms, Rat | ELISA, ICC, WB     | pab60039 |
| BAFF (aa254-269)  | -      | Rabbit | Hu, Ms      | IHC - P, WB        | pab74542 |

**BCMA antibodies**

| ANTIBODY TARGET   | CLONE | HOST   | SPECIES | APPLICATIONS            | CAT #    |
|-------------------|-------|--------|---------|-------------------------|----------|
| BCMA              | -     | Rabbit | Hu      | ELISA, ICC, IF, IHC, WB | pab60034 |
| BCMA (C-Terminus) | -     | Rabbit | Hu      | ELISA, IHC, WB          | pab70414 |

## BAFF-R antibodies

| ANTIBODY TARGET     | CLONE   | HOST   | SPECIES     | APPLICATIONS | CAT #    |
|---------------------|---------|--------|-------------|--------------|----------|
| BAFF-R              | 9B9     | Rat    | Ms          | B/N, FC      | mab10150 |
| BAFF-R              | 9B9     | Rat    | Ms          | B/N, FC      | mab10149 |
| BAFF-R [Biotin]     | 9B9     | Rat    | Ms          | B/N, FC      | mab10151 |
| BAFF-R [ATTO 647N]  | 9B9     | Rat    | Ms          | B/N, FC      | mab10152 |
| BAFF-R              | 11C1    | Mouse  | Hu          | FC, IHC - P  | mab71182 |
| BAFF-R              | HuBR9.1 | Mouse  | Hu          | FC           | mab10123 |
| BAFF-R [Biotin]     | HuBR9.1 | Mouse  | Hu          | FC           | mab10124 |
| BAFF-R [ATTO 488]   | HuBR9.1 | Mouse  | Hu          | FC           | mab10125 |
| BAFF-R [ATTO 647N]  | HuBR9.1 | Mouse  | Hu          | FC           | mab10126 |
| BAFF-R              | -       | Rabbit | Hu, Ms, Rat | IHC - P, WB  | pab75710 |
| BAFF-R (C-Terminus) | -       | Rabbit | Hu, Ms, Rat | IHC, WB      | pab60040 |

## TACI antibodies

| ANTIBODY TARGET   | CLONE | HOST   | SPECIES | APPLICATIONS     | CAT #    |
|-------------------|-------|--------|---------|------------------|----------|
| TACI              | 1A-10 | Rat    | Ms      | FC               | mab10153 |
| TACI [Biotin]     | 1A-10 | Rat    | Ms      | FC               | mab10154 |
| TACI (N-Terminus) | -     | Rabbit | Hu      | ICC, IHC - P, WB | pab73486 |
| TACI (aa116-132)  | -     | Rabbit | Hu, Ms  | FC, IHC - P, WB  | pab74547 |



## Related proteins

| PROTEIN NAME                           | HOST           | SPECIES | CAT #    |
|--|----------------|---------|----------|
| BAFF                                   | CHO cells      | Hu, Ms  | pro10374 |
| BAFF (60-mer) (soluble, highly active) | <i>E. coli</i> | Hu, Ms  | pro10367 |
| BAFF (aa134-285 fragment) (soluble)    | <i>E. coli</i> | Hu, Ms  | pro10301 |
| BAFF (soluble)                         | HEK 293 cells  | Hu, Ms  | pro10306 |
| BAFF-R                                 | HEK 293 cells  | Hu, Ms  | pro10310 |
| BCMA                                   | HEK 293 cells  | Hu, Ms  | pro10339 |
| BCMA                                   | HEK 293 cells  | Hu, Ms  | pro10335 |
| TACI                                   | HEK 293 cells  | Hu, Ms  | pro10338 |

## Related kits

| TARGET                                      | SPECIES | APPLICATIONS | CAT #    |
|---|---------|--------------|----------|
| BAFF Hypersensitive Kit (pre-coated plates) | Hu      | ELISA        | kit10034 |

**Ligands**

NGF  
BDNF  
NT-3  
NT-4

**Receptor**

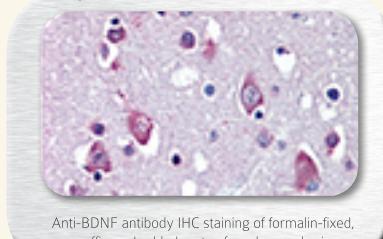
NGFR (TNFR-SF16)

NGFR (*CD271*) is a 75 kDa low affinity receptor for the Nerve Growth Factor (NGF), the Brain-derived Neurotrophic Factor (BDNF), and other neurotrophins such as NT-3 and NT-4, and whose main role lies in neuron survival and differentiation. Its ligands also bind to high affinity NGF receptors such as TrkA, TrkB and TrkC, which then balance its actions in normal conditions.

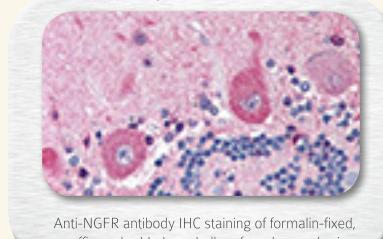
Studies have recently shown that NGFR could be involved in the development of the eyes and sensory neurons, as well as in muscle and nerves repair. It has also been reported that NGFR is highly expressed in melanoma tumor stem cells, and therefore could be a marker of this type of cancer.

## Related antibodies

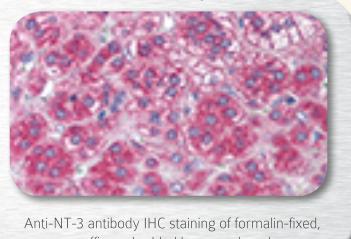
| ANTIBODY TARGET | CLONE   | HOST    | SPECIES             | APPLICATIONS             | CAT #    |
|-----------------|---------|---------|---------------------|--------------------------|----------|
| BDNF            | ANT-128 | Mouse   | Hu                  | ELISA                    | mab60049 |
| BDNF            | -       | Goat    | Hu, Ms, Rat, Ca     | IHC - P                  | pab72864 |
| BDNF            | -       | Chicken | Hu, Ms, Rat         | IHC, IP, WB              | pab77436 |
| NGFR            | NGFR5   | Mouse   | Hu, Rab, Mk, Fe, Ft | FC, ICC, IHC - P, IP, WB | mab20388 |
| NGFR            | NGFR5   | Mouse   | Hu, Rab, Mk, Fe, Ft | FC, ICC, IHC - P, IP, WB | mab71785 |
| NGFR [APC]      | NGFR5   | Mouse   | Hu, Rab, Mk, Fe, Ft | FC, ICC, IHC - P, IP, WB | mab20814 |
| NGFR [Biotin]   | NGFR5   | Mouse   | Hu, Rab, Mk, Fe, Ft | FC, ICC, IHC - P, IP, WB | mab20815 |
| NGFR [PE]       | NGFR5   | Mouse   | Hu, Rab, Mk, Fe, Ft | FC, ICC, IHC - P, IP, WB | mab20816 |
| NGFR            | -       | Rabbit  | Hu, Ms              | ICC, IHC - P, WB         | pab71832 |
| NT3             | -       | Rabbit  | Hu                  | IHC - P                  | pab71911 |
| NT4             | ANT-117 | Mouse   | Hu                  | ELISA                    | mab60372 |

BDNF  
pab72864

Anti-BDNF antibody IHC staining of formalin-fixed, paraffin-embedded cortex from human brain.

NGFR  
pab71832

Anti-NGFR antibody IHC staining of formalin-fixed, paraffin-embedded cerebellum from human brain.

NT-3  
pab71911

Anti-NT-3 antibody IHC staining of formalin-fixed, paraffin-embedded human adrenal.

## Related kits

| TARGET   | SPECIES | APPLICATIONS | CAT #    |
|----------|---------|--------------|----------|
| BDNF Kit | Hu      | ELISA        | kit20005 |
| BDNF Kit | Ms      | ELISA        | kit20006 |
| BDNF Kit | Rat     | ELISA        | kit20007 |

**Ligand****GITRL (TNF-SF18)****Receptor****GITR (TNFR-SF18)**

Glucocorticoid-induced TNF receptor ligand (GITRL) is preferentially expressed by regulatory T cells and binds to GITR (*CD357*). It is constitutively expressed and released as soluble form by solid tumors and various hematopoietic malignancies. GITRL causes differentiation of osteoclasts, activation of macrophages, but also alteration of carcinoma and leukemia cells, and influences T cell proliferation as well

as TCR-mediated apoptosis. GITRL is implicated in the development of autoimmune diseases and in the immune response against infectious pathogens and tumors. Besides, GITR serves as a negative regulator for NK cell activation and mediates NF- $\kappa$ B activation via the TRAF2/NIK pathway.

**GITRL and GITR antibodies**

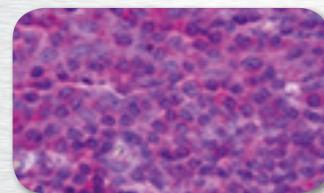
| ANTIBODY TARGET | CLONE    | HOST   | SPECIES | APPLICATIONS       | CAT #    |
|-----------------|----------|--------|---------|--------------------|----------|
| GITRL           | MGTL 10  | Rat    | Ms      | ELISA, FC          | mab10009 |
| GITRL           | MGTL 15  | Rat    | Ms      | ELISA, FC, WB      | mab10010 |
| GITRL           | -        | Rabbit | Ms      | ELISA, FC, WB      | pab10003 |
| GITRL           | -        | Rabbit | Hu      | ELISA, WB          | pab10038 |
| GITRL           | -        | Rat    | Ms      | ELISA, FC, WB      | pab10039 |
| GITRL [Biotin]  | -        | Rabbit | Ms      | ELISA, FC, WB      | pab10004 |
| GITR            | 2H4      | Mouse  | Hu, Ms  | ELISA, IHC - P, WB | mab71102 |
| GITR            | AIT 158D | Rat    | Hu      | ELISA, FC          | mab10017 |
| GITR            | MGIT 02  | Rat    | Ms      | ELISA, FC          | mab10007 |
| GITR            | MGIT 07  | Rat    | Ms      | ELISA, FC, WB      | mab10008 |
| GITR            | -        | Rat    | Hu      | ELISA, FC          | pab10032 |
| GITR            | -        | Rat    | Ms      | ELISA, FC, WB      | pab10001 |
| GITR [Biotin]   | -        | Rat    | Ms      | ELISA, FC, WB      | pab10002 |

**GITR mab10008**

Anti-GITR WB staining of (1) mouse GITR fusion protein, (2) transfected GITR-full length cell lysate and (3) Concanavalin A-treated mouse T cell lysate.

**GITR mab71102**

Anti-GITR antibody IHC staining of formalin-fixed, paraffin-embedded human tonsil.

**GITRL proteins**

| PROTEIN NAME    | HOST           | SPECIES | CAT #    |
|-----------------|----------------|---------|----------|
| GITRL (soluble) | HEK 293 cells  | Hu      | pro10263 |
| GITRL (soluble) | HEK 293 cells  | Ms      | pro10255 |
| GITRL (soluble) | <i>E. coli</i> | Hu      | pro10267 |
| GITRL (soluble) | <i>E. coli</i> | Ms      | pro10256 |

**GITR proteins**

| PROTEIN NAME | HOST          | SPECIES | CAT #    |
|--------------|---------------|---------|----------|
| GITR         | HEK 293 cells | Hu      | pro10311 |
| GITR         | HEK 293 cells | Ms      | pro10291 |

**Ligand**

SPAK

**Receptor**

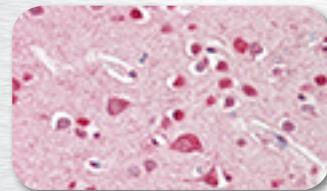
RELT (TNFR-SF19L)

Receptor Expressed in Lymphoid Tissues (RELT) is one of the last found members of the TNF receptors superfamily. It is mainly expressed in hematologic tissues such as spleen or lymph nodes, and

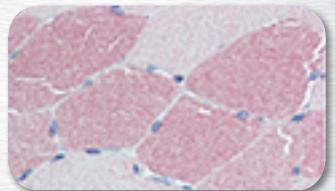
also in lymphomas and leukemias. Contrary to other TNF receptors, it has been shown to activate the JNK and p38 downstream pathways but not NF- $\kappa$ B.

## Related antibodies

| ANTIBODY TARGET   | CLONE | HOST   | SPECIES | APPLICATIONS       | CAT #    |
|-------------------|-------|--------|---------|--------------------|----------|
| RELT (aa361-410)  | -     | Rabbit | Hu, Ms  | ELISA, IHC - P, WB | pab77294 |
| SPAK (Internal)   | -     | Goat   | Hu      | ELISA, IHC - P, WB | pab75603 |
| SPAK (C-Terminus) | -     | Rabbit | Hu, Ms  | ELISA, IHC - P, WB | pab73305 |

SPAK  
pab75603

Anti-SPAK antibody IHC staining of formalin-fixed, paraffin-embedded cortex from human brain.

SPAK  
pab73305

Anti-SPAK antibody IHC staining of formalin-fixed, paraffin-embedded human skeletal muscle.

**Ligand**

N-APP

**Receptor**

DR6 (TNFR-SF21)

Recent studies have demonstrated that DR6 interacts with N-APP, the amino-terminal part of amyloid beta when cleaved by secretases.

Alzheimer's disease is one of the major cause of N-APP-induced activation of DR6.

## DR6 antibodies

| ANTIBODY TARGET  | CLONE      | HOST   | SPECIES | APPLICATIONS | CAT #    |
|------------------|------------|--------|---------|--------------|----------|
| DR6              | DR-6-04-EC | Mouse  | Hu      | FC, ICC, IP  | mab20240 |
| DR6 [FITC]       | DR-6-04-EC | Mouse  | Hu      | FC, ICC, IP  | mab20886 |
| DR6 [PE]         | DR-6-04-EC | Mouse  | Hu      | FC, ICC, IP  | mab20887 |
| DR6 (aa355-385)  | -          | Rabbit | Hu      | IHC - P, WB  | pab77126 |
| DR6 (N-Terminus) | -          | Rabbit | Hu      | WB           | pab60123 |

## DR6 proteins

| PROTEIN NAME | HOST          | SPECIES | CAT #    |
|--------------|---------------|---------|----------|
| DR6          | HEK 293 cells | Hu      | pro10299 |
| DR6          | HEK 293 cells | Ms      | pro10327 |

**Ligands**

Ectodysplasin A1  
Ectodysplasin A2

**Receptors**

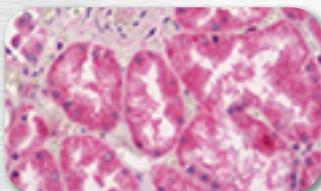
EDAR  
EDA2R (TNFR-SF27)

Ectodysplasin receptors play a primary role in developmental biology. They are involved in ectoderm-mesoderm interactions during early embryo development which are responsible for many tissues formation

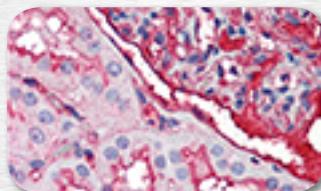
(skin, hair, teeth...). Decreasing expression of ectodysplasin ligands can subsequently lead to loss of these tissues in adults.

**Related antibodies**

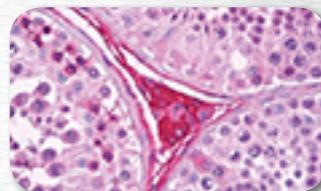
| ANTIBODY TARGET | CLONE | HOST   | SPECIES     | APPLICATIONS           | CAT #    |
|-----------------|-------|--------|-------------|------------------------|----------|
| EDA1 (Internal) | -     | Rabbit | Hu, Ms, Rat | ELISA, IF, IHC - P, WB | pab77528 |
| EDA2R           | -     | Rabbit | Hu          | IHC - P, WB            | pab75020 |
| EDA2R           | -     | Rabbit | Hu          | IHC - P, WB            | pab75110 |
| EDA2R           | -     | Rabbit | Hu          | ELISA, IHC, WB         | pab80464 |

EDA1  
pab77528

Anti-EDA1 antibody IHC staining of formalin-fixed, paraffin-embedded human kidney.

EDA2R  
pab75020

Anti-EDA2R antibody IHC staining of formalin-fixed, paraffin-embedded human kidney.

EDA2R  
pab75110

Anti-EDA2R antibody IHC staining of formalin-fixed, paraffin-embedded human testis.

**Related proteins**

| PROTEIN NAME   | HOST           | SPECIES | CAT #    |
|----------------|----------------|---------|----------|
| EDA1 (soluble) | <i>E. coli</i> | Hu, Ms  | pro10361 |
| EDAR           | CHO cells      | Hu, Ms  | pro10370 |



Our range of products constantly increases, but if you don't find the antibody you're looking for in our catalogue, we can develop it for you. Our services will allow you to create a custom antibody that meets your needs.

**CUSTOM  
MONOCLONAL  
ANTIBODY**

**CUSTOM  
POLYCLONAL  
ANTIBODY**

# Death receptors signalling pathway

Death receptors are the members of the TNF receptors that contain a death domain (TRAIL receptors, Fas, TNF-R1 ...). Among others, their main role is to activate caspases-involving pathways, which then leads

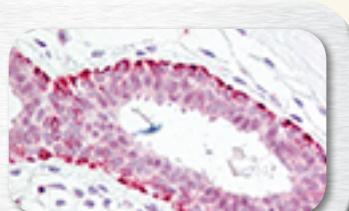
to apoptosis. Death domain-containing proteins such as FADD and TRADD are the main adaptor proteins of these receptors to activate caspase-mediated apoptosis.

## Death domain-containing adaptor proteins antibodies

| ANTIBODY TARGET    | CLONE | HOST   | SPECIES | APPLICATIONS       | CAT #    |
|--------------------|-------|--------|---------|--------------------|----------|
| FADD (C-Terminus)  | -     | Rabbit | Hu      | ELISA, IHC - P, WB | pab74251 |
| TRADD (C-Terminus) | -     | Rabbit | Hu, Ms  | ELISA, IHC - P, WB | pab75674 |

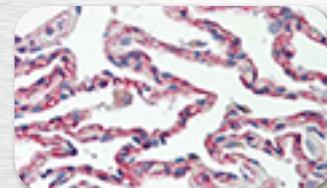
**FADD**  
pab74251

Anti-FADD antibody IHC staining of formalin-fixed, paraffin-embedded human breast.



**TRADD**  
pab75674

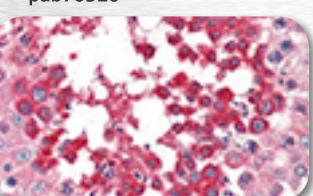
Anti-TRADD antibody IHC staining of formalin-fixed, paraffin-embedded human lung.



## Caspases antibodies

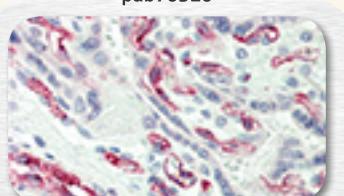
| ANTIBODY TARGET        | CLONE   | HOST   | SPECIES              | APPLICATIONS       | CAT #    |
|------------------------|---------|--------|----------------------|--------------------|----------|
| Caspase 1 (aa371-390)  | 14F468  | Mouse  | Hu                   | IHC - P, WB        | mab70005 |
| Caspase 1              | -       | Rabbit | Hu                   | ELISA, IHC - P, WB | pab70527 |
| Caspase 1              | -       | Rabbit | Hu, Ms, Rat          | IHC, IP, WB        | pab72774 |
| Caspase 1 (C-Terminus) | -       | Rabbit | Hu                   | ELISA, IHC, WB     | pab70526 |
| Caspase 1 [FITC]       | -       | Rabbit | Hu                   | ELISA, IHC - P, WB | pab75808 |
| Caspase 2              | -       | Rabbit | Hu                   | IHC - P, WB        | pab75029 |
| Caspase 2              | -       | Rabbit | Hu, Ms, Rat          | IHC - P, WB        | pab75811 |
| Caspase 2 (N-Terminus) | -       | Rabbit | Hu, Ms               | ICC, IHC - P, WB   | pab70520 |
| Caspase 2 (Internal)   | -       | Rabbit | Hu                   | ELISA, IHC - P, WB | pab74347 |
| Caspase 3              | 31A1067 | Mouse  | Hu, Ms               | IHC - P, WB        | mab70193 |
| Caspase 3              | -       | Rabbit | Hu, Ma, Chick, Ye    | WB                 | pab60068 |
| Caspase 3              | -       | Rabbit | Hu, Ms, Rat, Rab ... | IHC, IP, WB        | pab75206 |
| Caspase 3              | -       | Rabbit | Hu, Ma, Chick, Ye    | IHC - P, WB        | pab75218 |
| Caspase 3 (N-Terminus) | -       | Rabbit | Hu                   | IHC - P, IP, WB    | pab74901 |
| Caspase 3 (Internal)   | -       | Rabbit | Hu                   | IHC - P            | pab70528 |
| Caspase 3 (aa166-183)  | -       | Rabbit | Hu                   | IHC - P, WB        | pab72089 |

**Caspase 1**  
pab70526



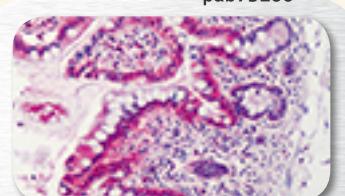
Anti-Caspase 1 antibody IHC staining of formalin-fixed, paraffin-embedded human testis.

**Caspase 2**  
pab70520



Anti-Caspase 2 antibody IHC staining of formalin-fixed, paraffin-embedded human placenta.

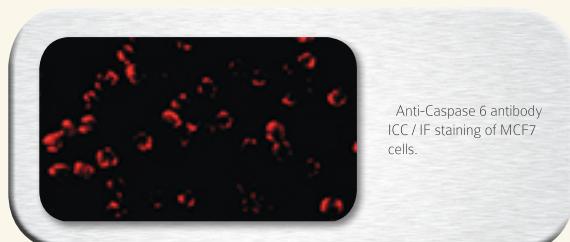
**Caspase 3**  
pab75206



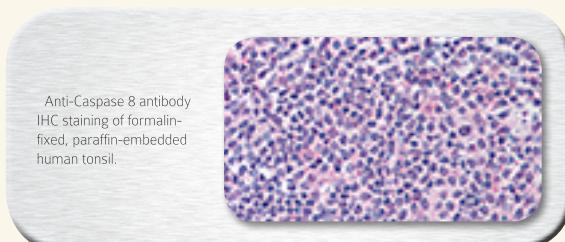
Anti-Caspase 3 antibody IHC staining of formalin-fixed, paraffin-embedded human small intestine.

## Caspases antibodies (continued)

| ANTIBODY TARGET           | CLONE    | HOST    | SPECIES              | APPLICATIONS           | CAT #     |
|---------------------------|----------|---------|----------------------|------------------------|-----------|
| Caspase 4                 | -        | Rabbit  | Hu, Ms               | IHC, WB                | pab60440  |
| Caspase 4                 | -        | Rabbit  | Hu, Ms               | IHC - P, WB            | pab70523  |
| Caspase 4 (N-Terminus)    | -        | Rabbit  | Hu, Ms               | ICC, IHC - P, WB       | pab70522  |
| Caspase 4 (Internal)      | -        | Rabbit  | Hu                   | IHC - P, WB            | pab70521  |
| Caspase 4 (aa1-89)        | -        | Chicken | Hu                   | IHC - P, WB            | pab74177  |
| Caspase 5                 | -        | Rabbit  | Hu                   | ICC, IHC - P, WB       | pab70524  |
| Caspase 6 (N-Terminus)    | -        | Rabbit  | Hu                   | ICC, IHC - P, WB       | pab70530  |
| Caspase 6 (Internal)      | -        | Rabbit  | Hu                   | IF, ICC, IHC - P, WB   | pab70529  |
| Caspase 6 (Internal)      | -        | Rabbit  | Hu, Rat              | ELISA, IHC - P, WB     | pab74395  |
| Caspase 6 (C-Terminus)    | -        | Rabbit  | Hu, Ms, Rat          | IHC - P, WB            | pab75813  |
| Caspase 6 (Cleavage site) | -        | Rabbit  | Hu, Ms, Rab          | ELISA, IHC - P, WB     | pab75201  |
| Caspase 7                 | 25B881.1 | Mouse   | Hu                   | IHC - P, WB            | mab70171  |
| Caspase 7                 | 7-1-11   | Mouse   | Hu, Ms, Rat, Rab ... | IHC - P, WB            | mab70350  |
| Caspase 7                 | 10-1-62  | Mouse   | Hu, Ms, Rat, Mk ...  | IHC - P, WB            | mab70351  |
| Caspase 7 (N-Terminus)    | -        | Rabbit  | Hu, Ms, Rat          | IHC - P, WB            | pab70532  |
| Caspase 7 (C-Terminus)    | -        | Rabbit  | Hu, Ms, Rat          | IHC, WB                | pab70531  |
| Caspase 8                 | C15      | Mouse   | Hu                   | ICC, IP, WB            | mab10080  |
| Caspase 8                 | -        | Rabbit  | Hu, Ms               | IHC - P, WB            | pab70534  |
| Caspase 8                 | -        | Rabbit  | Hu, Ms, Rat, Bov, Mk | IHC - P, IP, WB        | pab75186  |
| Caspase 8 (C-Terminus)    | -        | Rabbit  | Hu, Ms, Rat          | ICC, WB                | pab60441  |
| Caspase 8 (C-Terminus)    | -        | Rabbit  | Hu, Ms, Rat          | ICC, IHC - P, WB       | pab70533  |
| Caspase 9                 | 2-22     | Mouse   | Hu, Mk               | IHC - P, IP, WB        | mab70352  |
| Caspase 9 (Internal)      | -        | Rabbit  | Hu                   | ELISA, IHC - P, WB     | pab74396  |
| Caspase 9 (aa299-318)     | -        | Rabbit  | Hu                   | ELISA, ICC, IHC, WB    | pab70535  |
| Caspase 9 (aa299-318)     | -        | Rabbit  | Hu, Ms, Rat          | IHC - P, WB            | pab77262  |
| Caspase 9 (aa345-359)     | -        | Rabbit  | Hu, Ms, Rat          | IHC - P, WB            | pab74496  |
| Caspase 10 (C-Terminus)   | -        | Rabbit  | Hu                   | ELISA, IF, IHC - P, WB | pab75660  |
| Caspase 12                | -        | Rabbit  | Hu, Ms, Rat          | IHC, WB                | pab70519  |
| Caspase 12 (aa2-17)       | -        | Rabbit  | Hu, Ms, Rat          | IHC - P, WB            | pab70518  |
| Caspase 12 (aa100-116)    | -        | Rabbit  | Hu, Ms, Rat          | ELISA, IHC - P, WB     | pab70517  |
| Caspase 14                | -        | Rabbit  | Hu                   | ELISA, IHC, WB         | pab0038-P |
| Caspase 14 (C-Terminus)   | -        | Rabbit  | Hu, Ms, Rat          | IHC - P, WB            | pab75003  |



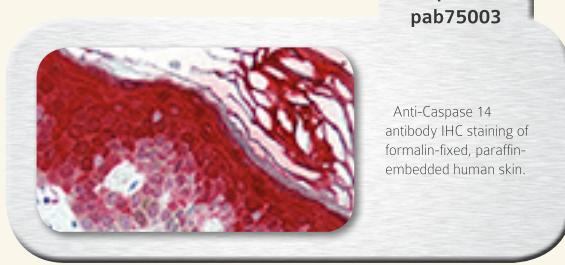
Caspase 6  
pab70529



Caspase 8  
pab75186



Caspase 10  
pab75660



Caspase 14  
pab75003

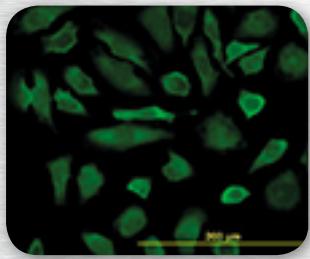
## Caspases kits

| TARGET        | SPECIES | APPLICATIONS | CAT #    |
|---------------|---------|--------------|----------|
| Caspase 1 Kit | Ms      | ELISA        | kit10035 |
| Caspase 4 Kit | Hu      | ELISA        | kit20033 |

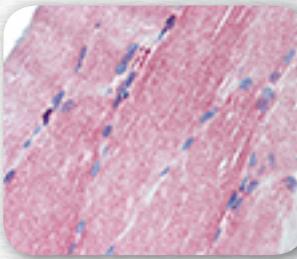
(FADD-like IL-1 $\beta$ -converting enzyme)-inhibitory protein (c-FLIP) antibodies

| ANTIBODY TARGET                     | CLONE  | HOST   | SPECIES     | APPLICATIONS            | CAT #    |
|-------------------------------------|--------|--------|-------------|-------------------------|----------|
| c-FLIP                              | 2F12   | Mouse  | Hu          | ELISA, IF, IHC - P, WB  | mab70934 |
| c-FLIP                              | Dave-2 | Rat    | Hu, Ms      | IP, WB                  | mab10106 |
| c-FLIP                              | NF6    | Mouse  | Hu          | ICC, IHC, WB            | mab10079 |
| c-FLIP [Biotin]                     | NF6    | Mouse  | Hu          | ICC, IHC, WB            | mab10168 |
| c-FLIP (N-Terminus)                 | -      | Rabbit | Hu, Ms, Rat | ICC, WB                 | pab60141 |
| c-FLIP (C-Terminus)                 | -      | Rabbit | Hu          | WB                      | pab60139 |
| c-FLIP (C-Terminus)                 | -      | Rabbit | Ms          | WB                      | pab60140 |
| c-FLIP (aa191-209)                  | -      | Rabbit | Hu, Ms      | ELISA, ICC, IHC - P, WB | pab70647 |
| c-FLIP (aa206-222)                  | -      | Rabbit | Hu          | IHC - P, WB             | pab74499 |
| c-FLIP $\gamma/\delta$ (C-Terminus) | -      | Rabbit | Hu          | ICC, WB                 | pab60142 |

Anti-c-FLIP antibody ICC / IF staining of HeLa cells.

c-FLIP  
mab70934

Anti-c-FLIP antibody IHC staining of formalin-fixed, paraffin-embedded human skeletal muscle.

c-FLIP  
pab74499

Anti-c-FLIP antibody IHC staining of formalin-fixed, paraffin-embedded human pancreas.



Antibodies



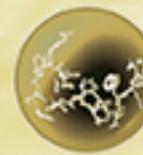
Kits



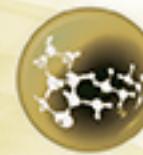
Reagents



Proteins



Peptides



Chemicals



If you need a specific product,  
we can find it for you!

Take our survey to give us information about  
the specific products you are looking for,  
we will do our best to find it for you!

<http://www.covalab.net/survey/sourcing/welcome.php>

11 avenue Albert Einstein  
69100 Villeurbanne – FRANCE



# Downstream signalling pathway

1

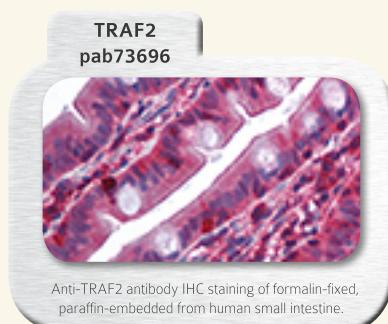
## TNF receptor-associated factors (TRAFs)

TNF receptor associated factors (TRAFs) are a family composed of 6 members (TRAF1 to TRAF6) and are the main adaptor proteins for the TNF receptors upon binding with their respective ligands.

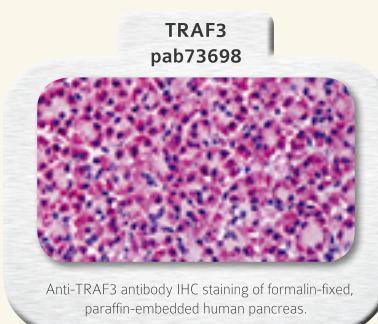
Activation of TRAFs triggers subsequent activation of major downstream signalling pathways such as JNK - p38 and NF-**κB**.

### TRAFs antibodies

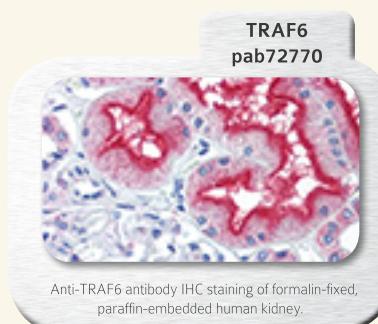
| ANTIBODY TARGET    | CLONE   | HOST   | SPECIES         | APPLICATIONS         | CAT #    |
|--------------------|---------|--------|-----------------|----------------------|----------|
| TRAF1 (C-Terminus) | -       | Goat   | Hu, Ms          | ELISA, IHC - P, WB   | pab73934 |
| TRAF2 (N-Terminus) | -       | Rabbit | Hu, Ms, Rat     | IHC - P, WB          | pab73696 |
| TRAF2 (C-Terminus) | -       | Goat   | Hu, Ms, Rat, Ca | ELISA, IHC - P, WB   | pab73165 |
| TRAF2 (aa205-222)  | 33A1293 | Mouse  | Hu              | IHC - P, WB          | mab70186 |
| TRAF3 (N-Terminus) | -       | Rabbit | Hu, Ms, Rat     | ICC, IHC - P, WB     | pab73698 |
| TRAF3 (C-Terminus) | -       | Rabbit | Hu, Ms          | IHC - P, WB          | pab73697 |
| TRAF3 (aa323-340)  | -       | Rabbit | Hu, Ms          | IHC - P, WB          | pab74619 |
| TRAF4              | -       | Rabbit | Hu              | ELISA, IHC, WB       | pab0551  |
| TRAF5 (aa77-186)   | 55A219  | Mouse  | Hu              | IHC - P, WB          | mab70187 |
| TRAF6              | -       | Rabbit | Hu              | ICC, IF, IHC - P, WB | pab73360 |
| TRAF6              | -       | Rabbit | Ms              | IHC - P, IP, WB      | pab77404 |
| TRAF6 (Internal)   | -       | Rabbit | Hu, Ms          | IHC - P, IP, WB      | pab72770 |
| TRAF6 (C-Terminus) | -       | Rabbit | Hu, Ms          | IHC - P, IP, WB      | pab72244 |
| TRAF6 (C-Terminus) | -       | Rabbit | Hu, Ms, Rat     | ICC, IHC - P, WB     | pab74917 |



Anti-TRAF2 antibody IHC staining of formalin-fixed, paraffin-embedded from human small intestine.



Anti-TRAF3 antibody IHC staining of formalin-fixed, paraffin-embedded human pancreas.



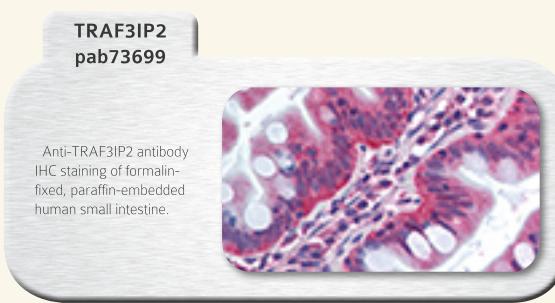
Anti-TRAF6 antibody IHC staining of formalin-fixed, paraffin-embedded human kidney.

### TRAF3 interacting proteins antibodies

| ANTIBODY TARGET      | CLONE | HOST   | SPECIES     | APPLICATIONS           | CAT #    |
|----------------------|-------|--------|-------------|------------------------|----------|
| TRAF3IP2             | 4A3   | Mouse  | Hu          | ELISA, IF, IHC - P, WB | mab70850 |
| TRAF3IP2             | -     | Rabbit | Hu, Ms      | WB                     | pab51034 |
| TRAF3IP2 (aa2-15)    | -     | Rabbit | Hu          | IHC - P, WB            | pab73699 |
| TRAF3IP3 (aa251-300) | -     | Rabbit | Hu, Ms, Rat | ELISA, IF, IHC - P, WB | pab76252 |



Anti-TRAF3IP2 antibody IHC staining of formalin-fixed, paraffin-embedded human prostate.



Anti-TRAF3IP2 antibody IHC staining of formalin-fixed, paraffin-embedded human small intestine.

## 2

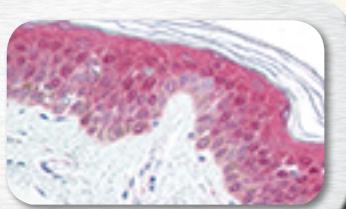
## MapK/Erk Kinases (MEKs) &amp; MEK Kinases (MEKKs)

## MEKs antibodies

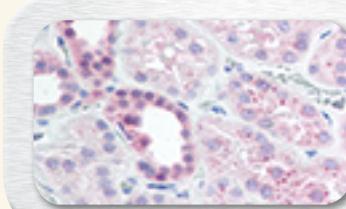
| ANTIBODY TARGET   | CLONE | HOST   | SPECIES         | APPLICATIONS       | CAT #    |
|-------------------|-------|--------|-----------------|--------------------|----------|
| MEK1 (N-Terminus) | -     | Rabbit | Hu, Ms, Rat, Xe | IF, IHC - P, WB    | pab75211 |
| MEK1 (Internal)   | -     | Rabbit | Hu, Ms, Rat     | ELISA, IHC - P, WB | pab74321 |
| MEK1 (Internal)   | -     | Rabbit | Hu, Ms, Rat     | ELISA, IHC - P, WB | pab74322 |
| MEK2 (pThr394)    | -     | Rabbit | Hu, Ms, Rat     | IHC - P, WB        | pab72138 |
| MEK3              | 1D10  | Mouse  | Hu              | ELISA, IHC - P, WB | mab70898 |
| MEK3 (Internal)   | -     | Rabbit | Hu, Ms, Rat     | ELISA, IHC - P, WB | pab74266 |
| MEK4 (pSer80)     | -     | Rabbit | Hu, Ms, Rat     | IHC - P, WB        | pab72139 |
| MEK4 (Ser80)      | -     | Rabbit | Hu, Ms, Rat     | IHC - P, WB        | pab72140 |
| MEK6 (N-Terminus) | -     | Rabbit | Hu, Ms          | IHC - P, WB        | pab74916 |
| MEK6 (C-Terminus) | -     | Rabbit | Hu, Ms, Rat, Xe | IHC - P, IP, WB    | pab72827 |

MEK2  
pab72138

Anti-MEK2 antibody IHC staining of formalin-fixed, paraffin-embedded human skin.

MEK4  
pab72139

Anti-MEK4 antibody IHC staining of formalin-fixed, paraffin-embedded human kidney.



## MEKKs antibodies

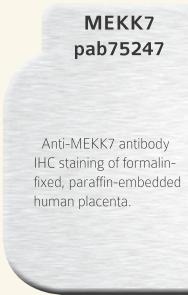
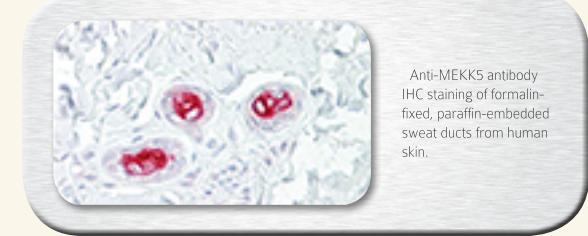
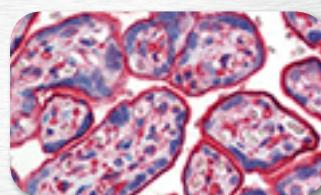
| ANTIBODY TARGET    | CLONE | HOST   | SPECIES                 | APPLICATIONS            | CAT #    |
|--------------------|-------|--------|-------------------------|-------------------------|----------|
| MEKK3              | -     | Rabbit | Hu, Ms, Ma, D. mel. ... | IHC - P, WB             | pab74770 |
| MEKK5 (N-Terminus) | -     | Rabbit | Hu, Ms                  | ELISA, IHC - P, WB      | pab71679 |
| MEKK5 (N-Terminus) | -     | Rabbit | Hu                      | ELISA, IHC - P, WB      | pab74257 |
| MEKK5 (C-Terminus) | -     | Rabbit | Hu                      | ICC, IF, IP, WB         | pab60029 |
| MEKK5 (C-Terminus) | -     | Rabbit | Hu, Ms                  | ELISA, ICC, IHC - P, WB | pab71678 |
| MEKK7 (N-Terminus) | -     | Rabbit | Hu, Ms, Rat             | IHC - P, WB             | pab71680 |
| MEKK7 (Internal)   | -     | Rabbit | Hu, Ms, Rat             | ELISA, IHC - P, WB      | pab73757 |
| MEKK7 (aa563-579)  | -     | Rabbit | Hu, Ms, Rat, Ma, Xe ... | IHC - P, WB             | pab75247 |
| MEKK8 (N-Terminus) | -     | Rabbit | Hu                      | IHC - P                 | pab71682 |
| MEKK8 (C-Terminus) | -     | Rabbit | Hu                      | IHC - P                 | pab71681 |
| MEKK9 (Internal)   | -     | Rabbit | Hu                      | IHC - P                 | pab71683 |
| MEKK9 (Internal)   | -     | Rabbit | Hu                      | IHC - P                 | pab71684 |
| MEKK10 (aa110-138) | -     | Rabbit | Hu, Ms                  | IHC - P, WB             | pab76809 |

MEKK5  
pab74257

Anti-MEKK5 antibody IHC staining of formalin-fixed, paraffin-embedded sweat ducts from human skin.

MEKK7  
pab75247

Anti-MEKK7 antibody IHC staining of formalin-fixed, paraffin-embedded human placenta.



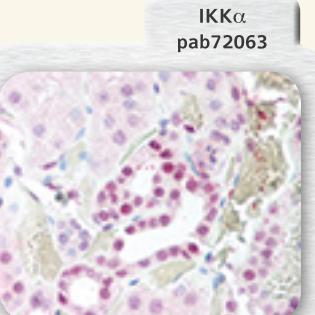
**3****NF-κB inhibitors (IκBs) and IκB kinases (IKKs)****IκBs antibodies**

| ANTIBODY TARGET   | CLONE | HOST   | SPECIES     | APPLICATIONS               | CAT #    |
|-------------------|-------|--------|-------------|----------------------------|----------|
| IκBα (C-Terminus) | -     | Rabbit | Hu, Ms, Rat | IHC - P, IP, WB            | pab72117 |
| IκBα (C-Terminus) | -     | Rabbit | Hu, Ms, Rat | ELISA, IF, IHC - P, IP, WB | pab75488 |
| IκBα (aa34-48)    | -     | Rabbit | Hu          | IHC - P, WB                | pab74615 |
| IκBα (Ser32)      | -     | Rabbit | Hu, Ms, Rat | IHC - P, WB                | pab72093 |
| IκBβ (C-Terminus) | -     | Rabbit | Hu          | ELISA, IF, IHC - P, IP, WB | pab75403 |
| IκBδ (aa91-119)   | -     | Rabbit | Hu, Ms      | IHC - P, WB                | pab77635 |

**IKKs antibodies**

| ANTIBODY TARGET   | CLONE  | HOST    | SPECIES     | APPLICATIONS               | CAT #    |
|-------------------|--------|---------|-------------|----------------------------|----------|
| IKKα (C-Terminus) | -      | Rabbit  | Hu, Ms, Rat | ELISA, IHC - P, IP, WB     | pab74764 |
| IKKα (C-Terminus) | -      | Rabbit  | Hu          | ELISA, IF, IHC - P, IP, WB | pab75374 |
| IKKα (aa 658-674) | -      | Rabbit  | Hu          | WB                         | pab60175 |
| IKKα (aa 699-715) | -      | Rabbit  | Hu          | WB                         | pab60176 |
| IKKα (aa 716-734) | -      | Rabbit  | Hu          | WB                         | pab60177 |
| IKKα (aa 716-734) | -      | Rabbit  | Hu          | ICC, IF, IHC - P, WB       | pab76187 |
| IKKα (Thr23)      | -      | Rabbit  | Hu, Ms, Rat | IHC - P, WB                | pab72063 |
| IKKβ              | -      | Rabbit  | Hu          | WB                         | pab60178 |
| IKKβ (Internal)   | -      | Rabbit  | Hu, Ms, Rat | ELISA, IHC - P             | pab74255 |
| IKKβ (C-Terminus) | -      | Rabbit  | Hu          | ICC, IHC - P, WB           | pab71497 |
| IKKβ (C-Terminus) | -      | Rabbit  | Hu          | ELISA, IF, IHC - P, IP, WB | pab75395 |
| IKKβ (aa310-376)  | -      | Chicken | Hu, Ms, Rat | IHC - P, WB                | pab74228 |
| IKKγ              | 46B844 | Mouse   | Hu          | FC, IHC - P, WB            | mab70378 |
| IKKγ              | -      | Rabbit  | Hu          | WB                         | pab52112 |
| IKKγ              | -      | Rabbit  | Hu          | WB                         | pab52113 |
| IKKγ (N-Terminus) | -      | Rabbit  | Hu, Ms, Rat | WB                         | pab60180 |
| IKKγ (aa 2-13)    | -      | Rabbit  | Hu          | ELISA, IHC - P, WB         | pab71499 |
| IKKγ (aa 51-100)  | -      | Rabbit  | Hu          | ELISA, IF, IHC - P, WB     | pab77230 |
| IKKγ (aa 385-399) | -      | Rabbit  | Hu          | ELISA, IHC - P, WB         | pab71500 |
| IKKγ (aa 400-416) | -      | Rabbit  | Hu, Ms, Rat | ICC, IHC - P, WB           | pab71501 |

Anti-IκBα antibody IHC staining of formalin-fixed, paraffin-embedded human skeletal muscle.

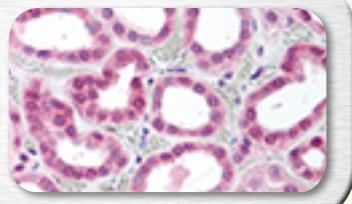


Anti-IKKβ antibody IHC staining of formalin-fixed, paraffin-embedded human spleen.

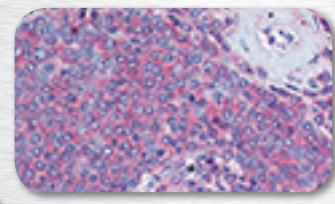


## IKKs antibodies (continued)

| ANTIBODY TARGET             | CLONE | HOST   | SPECIES | APPLICATIONS | CAT #    |
|-----------------------------|-------|--------|---------|--------------|----------|
| IKK $\epsilon$              | -     | Rabbit | Hu      | IHC - P, WB  | pab76615 |
| IKK $\epsilon$ (C-Terminus) | -     | Rabbit | Hu      | WB           | pab60179 |
| IKK $\epsilon$ (aa701-716)  | -     | Rabbit | Hu      | IHC - P, WB  | pab71498 |

IKK $\gamma$   
pab71499

Anti-IKK $\gamma$  antibody IHC staining of formalin-fixed, paraffin-embedded human small intestine.

IKK $\epsilon$   
pab71498

Anti-IKK $\epsilon$  antibody IHC staining of formalin-fixed, paraffin-embedded human spleen.

## 4

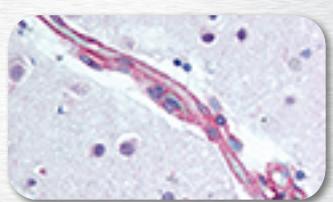
## JNK - p38 pathway

## c-Jun N-terminal kinases (JNK) antibodies

| ANTIBODY TARGET   | CLONE   | HOST   | SPECIES              | APPLICATIONS           | CAT #    |
|-------------------|---------|--------|----------------------|------------------------|----------|
| JNK1              | 1A2     | Mouse  | Hu                   | ELISA, IHC - P, WB     | mab71115 |
| JNK1              | 1E1     | Mouse  | Hu                   | ELISA, IHC - P, WB     | mab71114 |
| JNK1              | 1E2     | Mouse  | Hu                   | ELISA, IHC - P, WB     | mab71117 |
| JNK1              | 2F3     | Mouse  | Hu                   | ELISA, IHC - P, IP, WB | mab71094 |
| JNK1              | 3B12    | Mouse  | Hu                   | ELISA, IHC - P, WB     | mab71116 |
| JNK1              | 3H2     | Mouse  | Hu                   | ELISA, IHC - P, IP, WB | mab71095 |
| JNK1              | 4H5     | Mouse  | Hu                   | ELISA, IHC - P, IP, WB | mab71119 |
| JNK1              | 4H6     | Mouse  | Hu                   | ELISA, IHC - P, IP, WB | mab71118 |
| JNK2              | 1C1-3A8 | Mouse  | Hu                   | ELISA, IHC - P, WB     | mab71056 |
| JNK2 (N-Terminus) | -       | Rabbit | Hu                   | ELISA, IHC - P, WB     | pab72215 |
| JNK2 (C-Terminus) | -       | Rabbit | Hu                   | ELISA, IHC - P, WB     | pab72214 |
| JNK2 (aa217-230)  | -       | Goat   | Hu, Ms, Rat, Rab, Mk | ELISA, IHC - P, WB     | pab76690 |
| JNK2 (aa373-389)  | -       | Rabbit | Hu                   | IHC - P, WB            | pab74524 |

JNK1  
mab71117

Anti-JNK1 antibody IHC staining of formalin-fixed, paraffin-embedded human small intestine.

JNK2  
pab74524

Anti-JNK2 antibody IHC staining of formalin-fixed, paraffin-embedded cortex from human brain.

## p38 antibody

| ANTIBODY TARGET | CLONE | HOST   | SPECIES                | APPLICATIONS | CAT #    |
|-----------------|-------|--------|------------------------|--------------|----------|
| p38             | -     | Rabbit | Hu, Ms, Rat, Chick ... | IP, WB       | pab60246 |

## c-Fos and c-Jun antibodies

| ANTIBODY TARGET    | CLONE | HOST   | SPECIES             | APPLICATIONS           | CAT #     |
|--------------------|-------|--------|---------------------|------------------------|-----------|
| c-Fos              | 1H8   | Mouse  | Hu                  | ELISA, IHC - P, WB     | mab71123  |
| c-Fos              | -     | Rabbit | Hu                  | ELISA, EM, IHC, WB     | pab0012   |
| c-Fos              | -     | Rabbit | Hu                  | ELISA, EM, IHC, WB     | pab0012-P |
| c-Fos              | -     | Rabbit | Hu                  | ELISA, FC, IHC, IP, WB | pab0770-P |
| c-Fos (N-Terminus) | -     | Rabbit | Hu, Ms, Rat         | ELISA, IHC - P, WB     | pab74072  |
| c-Fos (Internal)   | -     | Rabbit | Hu, Ms, Rat         | ELISA, IHC - P, WB     | pab74178  |
| c-Jun              | -     | Rabbit | Hu, Ma, D. mel., Xe | IF, IHC - P, WB        | pab71563  |
| c-Jun              | -     | Rabbit | Hu, Ma, Chick ...   | WB                     | pab60054  |
| c-Jun (Internal)   | -     | Rabbit | Hu, Ms, Rat         | ELISA, IHC - P, IP, WB | pab74264  |
| c-Jun (Internal)   | -     | Rabbit | Hu, Ms, Rat         | ELISA, IF, IHC - P, WB | pab74331  |

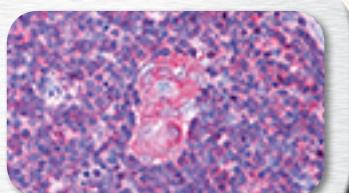
## 5

## Nuclear factor-kappa B (NF-κB)

### NF-κB p65 and p50 antibodies

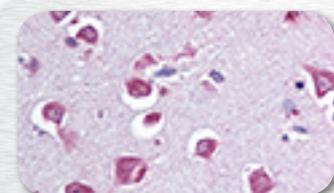
| ANTIBODY TARGET        | CLONE    | HOST   | SPECIES             | APPLICATIONS                   | CAT #    |
|------------------------|----------|--------|---------------------|--------------------------------|----------|
| NF-κB p50              | -        | Rabbit | Hu                  | ELISA, IF, IHC - P, IP, WB     | pab75401 |
| NF-κB p50              | -        | Rabbit | Hu                  | ELISA, GS, IF, IHC - P, IP, WB | pab75402 |
| NF-κB p50              | 4D1      | Mouse  | Hu                  | IF, IHC - P, WB                | mab71171 |
| NF-κB p50              | -        | Rabbit | Ms, Rat             | WB                             | pab60233 |
| NF-κB p65 (aa526-539)  | 112A1021 | Mouse  | Hu, Ms, Rat         | FC, IHC - P, WB                | mab70427 |
| NF-κB p65              | -        | Rabbit | Hu, Ms              | ICC, IP, WB                    | pab10163 |
| NF-κB p65              | -        | Rabbit | Hu, Ms, Rat         | ELISA, IHC - P, WB             | pab70150 |
| NF-κB p65              | -        | Rabbit | Hu, Ms, Bov, Eq, Mk | IHC - P, WB                    | pab73963 |
| NF-κB p65 (Internal)   | -        | Rabbit | Hu, Rat, Rab        | IHC - P, WB                    | pab73619 |
| NF-κB p65 (C-Terminus) | -        | Rabbit | Hu                  | ELISA, GS, IF, IHC - P, IP, WB | pab75410 |
| NF-κB p65 (pSer529)    | -        | Rabbit | Hu, Ms, Rat         | ELISA, IHC - P, IP, WB         | pab75411 |
| NF-κB p65 (Ser536)     | -        | Rabbit | Hu, Ms, Rat         | IHC - P, WB                    | pab72078 |

NF-κB p50  
pab75402



Anti-NF-κB p50 antibody  
IHC staining of formalin-fixed, paraffin-embedded human thymus.

NF-κB p65  
pab75411



Anti-NF-κB p65  
antibody IHC staining of formalin-fixed, paraffin-embedded cortex from human brain.

### Related proteins

| PROTEIN NAME              | HOST       | SPECIES | CAT #    |
|---------------------------|------------|---------|----------|
| NF-κB p50 (highly active) | Sf21 cells | Hu      | pro10409 |
| NF-κB p65 (highly active) | Sf21 cells | Hu      | pro10408 |

# Custom Services

## Custom Polyclonal Antibodies Development

- Anti-Protein
- Anti-Peptide
- Anti-Post-Translational Modification

## Custom Monoclonal Antibodies Development

## Monoclonal Antibodies Production

- In vivo*
- In vitro*

## Peptide Synthesis

## Antibody Purification

## Biomolecule Labelling

## Development of Immunoaffinity Supports (columns)

## Functionalisation of Solid Phases (microtitration plates)



**Expertise**  
**Advice for project design and optimisation of R&D processes**  
**Customised technical troubleshooting support**  
**Active follow-up of projects**

## *From Research to Discovery*

Our range of products constantly increases, but if you don't find the antibody you're looking for in our catalog, we can develop it for you. Our services will allow you to create a custom antibody that meets your needs.

So contact us by phone at +33(0) 437.654.230 or submit your enquiries at:  
[enquiries@covalab.com](mailto:enquiries@covalab.com).

## Covalab

11 avenue Albert Einstein  
69100 VILLEURBANNE - FRANCE  
Phone: +33(0) 437.654.230 — Fax: +33(0) 437.289.416  
E-mail for information: [enquiries@covalab.com](mailto:enquiries@covalab.com)  
E-mail for order: [orders@covalab.com](mailto:orders@covalab.com)  
Web: [www.covalab.com](http://www.covalab.com)