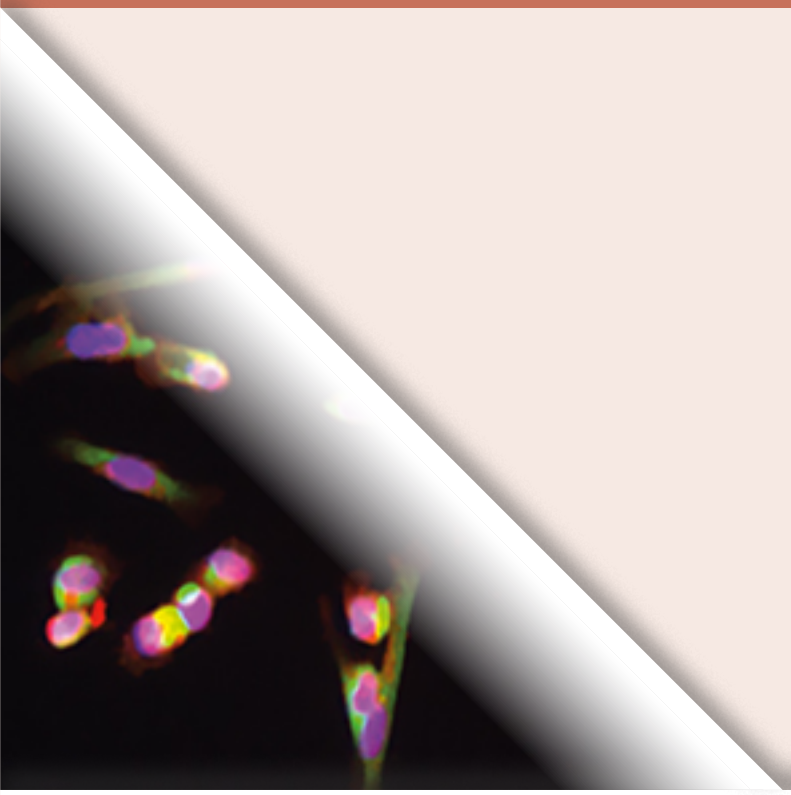


covalab

*From Research to Discovery*

# Ion Channels

## Ion channels-related products from Covalab

www.covalab.com — Covalab – 11 avenue Albert Einstein 69100 VILLEURBANNE – France — Tel: +33(0) 437.654.230

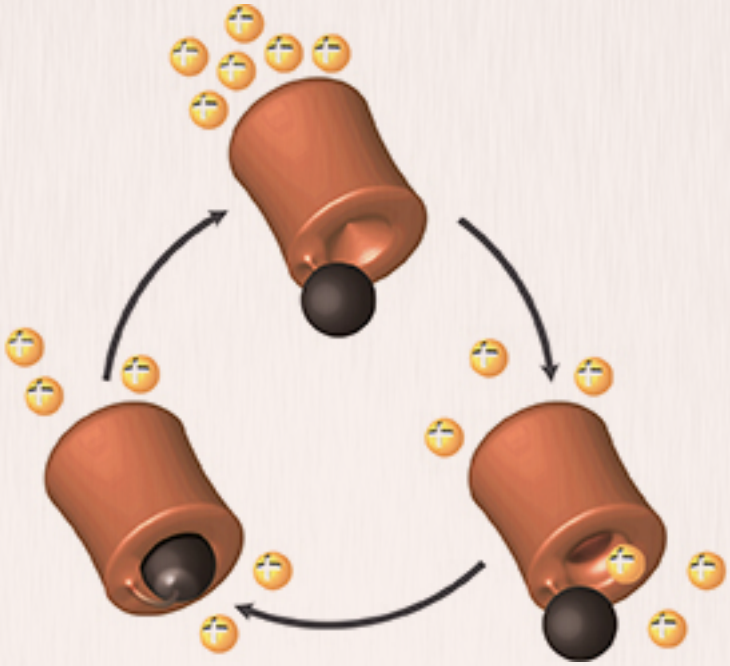
# Ion Channels

- Resting position -

The channel is closed and prevents ions from flowing through the membrane. Ions accumulate on one side and cause a potential difference between the inner and outer membrane layers.

- Inactivated position -

Changes of conformation trigger the folding of the N-terminal region of the channel which blocks the flow of ions.



- Opened position -

Upon polarization of the membrane, transmembrane segments of the channel change their conformation and let the ions diffuse through the membrane.

**Figure 1:** Voltage-gated channel activity cycle

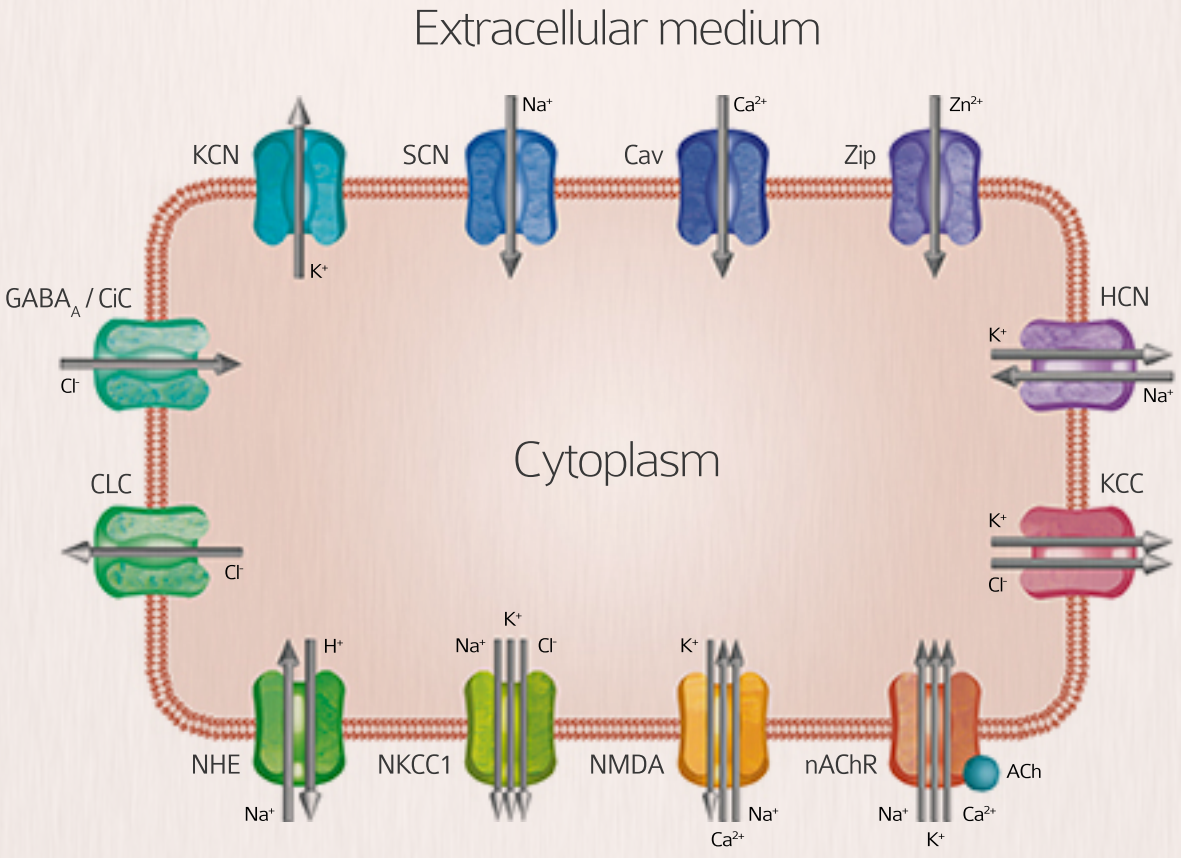



**Figure 2:** Main families of ion channels



11 avenue Albert Einstein
69100 Villeurbanne – FRANCE

# Potassium channels

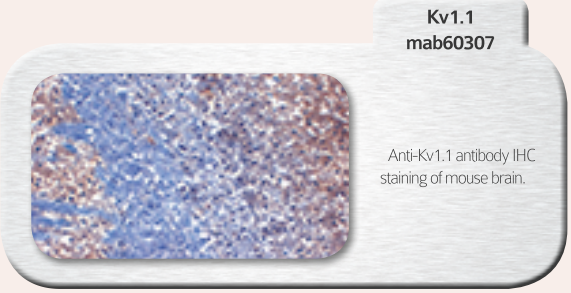
## 1 K+ voltage-gated channel subfamily A

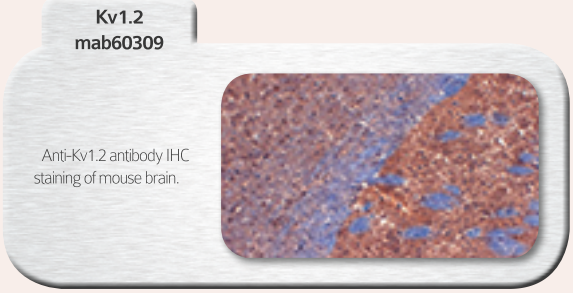
### Members of the subfamily A

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kv1.1 *(clone S20-78)* | KCNA1 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60308 |
| Kv1.1 *(clone S36-15)* (Extracellular domain) | KCNA1 | Mouse | Ms, Rat | ICC, IF, IHC, WB | mab60307 |
| Kv1.1 | KCNA1 | Rabbit | Hu, Ms, Rat | ELISA, ICC, IF, IHC, WB | pab0286 |
| Kv1.1 (Internal) | KCNA1 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab74148 |
| Kv1.2 *(clone S14-16)* | KCNA2 | Mouse | Hu, Ms, Rat, Zfi, Xe | FC, ICC, IF, IHC, IP, WB | mab60309 |
| Kv1.2 | KCNA2 | Rabbit | Hu | ELISA, IF, WB | pab0285 |
| Kv1.2 | KCNA2 | Rabbit | Hu | ELISA, IF, WB | pab0285-P |
| Kv1.2 | KCNA2 | Rabbit | Hu, Ms, Rat, Ca ... | ICC, WB | pab52458 |
| Kv1.2 | KCNA2 | Rabbit | Hu, Ms, Rat, Rab ... | B/N, IP, WB | pab52493 |
| Kv1.3 *(clone S23-27)* | KCNA3 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60310 |
| Kv1.3 | KCNA3 | Rabbit | Hu | ELISA, IF, WB | pab0287 |
| Kv1.3 | KCNA3 | Rabbit | Hu | ELISA, IF, WB | pab0287-P |
| Kv1.3 | KCNA3 | Rabbit | Hu, Ms, Rat, Rab ... | B/N, IP, WB | pab52495 |
| Kv1.3 (Internal) | KCNA3 | Rabbit | Hu | IHC - P | pab71568 |
| Kv1.3 (C-terminus) | KCNA3 | Rabbit | Hu | IHC - P | pab71567 |
| Kv1.4 *(clone S13-31)* | KCNA4 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60311 |
| Kv1.4 | KCNA4 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0284 |
| Kv1.5 *(clone S7-45)* | KCNA5 | Mouse | Hu, Ms, Rat | ICC, IHC, IP, WB | mab60312 |
| Kv1.5 | KCNA5 | Rabbit | Hu | ELISA, IHC - P, WB | pab0288 |
| Kv1.5 | KCNA5 | Rabbit | Hu | ELISA, IHC - P, WB | pab0288-P |
| Kv1.6 *(clone S19-35)* | KCNA6 | Mouse | Hu, Ms, Rat | IF, IHC, IP, WB | mab60313 |
| Kv1.6 | KCNA6 | Rabbit | Hu | ELISA, IF, WB | pab0289 |
| Kv1.7 | KCNA7 | Rabbit | Hu | ELISA, IF, WB | pab0290 |
| Kv1.7 | KCNA7 | Rabbit | Hu | ELISA, IF, WB | pab0290-P |
| Kv1.10 | KCNA10 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0295 |
| Kv1.10 | KCNA10 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0295-P |
| All Kv1 channels | KV1 | Rabbit | Hu, Ms, Rat, Bov ... | IP, WB | pab52451 |

### Regulatory subunits

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Regulatory Beta Subunit 1 - Kvβ1.1 *(clone S9-40)* | KCNAB1 | Mouse | Hu, Ms, Rat | IHC, IP, WB | mab60323 |
| Regulatory Beta Subunit 1 - Kvβ1.1 *(clone S40-17)* | KCNAB1 | Mouse | Hu, Ms, Rat | ICC, IHC - F, WB | mab60394 |
| Regulatory Beta Subunit 1 - Kvβ1.2 *(clone S47-42)* | KCNAB1 | Mouse | Hu, Ms, Rat | IF, IHC, IP, WB | mab60322 |
| Regulatory Beta Subunit 2 - Kvβ2 *(clone S17-70)* | KCNAB2 | Mouse | Hu, Ms, Rat, Zfi | ICC, IF, IHC, WB | mab60324 |





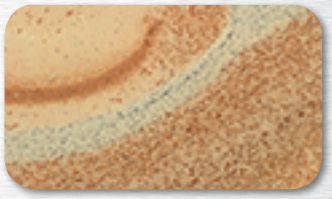

**Species abbreviations** - **Bov**: Bovine - **Ca**: Canine - **Hu**: Human - **Mk**: Primate - **Ms**: Mouse - **Rab**: Rabbit - **Xe**: Frog - **Zfi**: Zebrafish.

## 2 K+ voltage-gated channel subfamily B

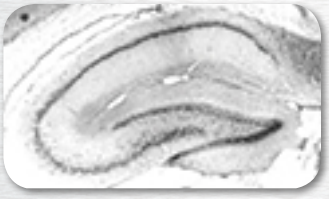
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kv2.1 *(clone S4-11)* | KCNB1 | Mouse | Hu, Ms, Rat, Mk | ICC, IF, IHC, WB | mab60315 |
| Kv2.1 *(clone S39-25)* | KCNB1 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60314 |
| Kv2.1 *(clone S89-34)* | KCNB1 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60316 |
| Kv2.1 | KCNB1 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0324 |
| Kv2.2 *(clone S37-89)* | KCNB2 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60317 |

**Kv2.1 mab60316**

Anti-Kv2.1 antibody IHC staining of mouse brain hippocampus showing strong membrane staining of neurons while white matter appears to be negative.



**Kv2.2 mab60317**

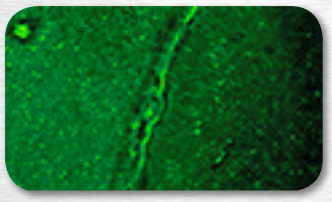


Anti-Kv2.2 antibody IHC staining of adult rat hippocampus.

## 3 K+ voltage-gated channel subfamily C

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kv3.1 *(clone S16B-8)* | KCNC1 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60318 |
| Kv3.1 | KCNC1 | Rabbit | Hu | ELISA, IF, WB | pab0325 |
| Kv3.1 | KCNC1 | Rabbit | Hu | ELISA, IF, WB | pab0325-P |
| Kv3.2 | KCNC2 | Rabbit | Hu | ELISA, IF, WB | pab0326 |
| Kv3.2 | KCNC2 | Rabbit | Hu | ELISA, IF, WB | pab0326-P |
| Kv3.2 | KCNC2 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab73856 |
| Kv3.3 | KCNC3 | Rabbit | Hu | ELISA, IF, WB | pab0327 |
| Kv3.4 *(clone S72-16)* | KCNC4 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60319 |
| Kv3.4 | KCNC4 | Rabbit | Hu | ELISA, IF, WB | pab0328 |
| Kv3.4 | KCNC4 | Rabbit | Hu | ELISA, IF, WB | pab0328-P |

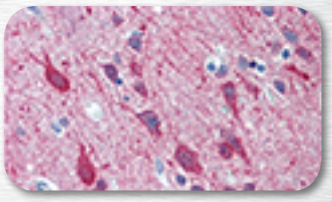
**Kv3.1 mab60318**



Anti-Kv3.1 antibody IF staining of human hippocampus.

**Kv3.2 pab73856**

Anti-Kv3.2 antibody IHC staining of human cortex.



**Applications abbreviations** - B/N: blocking/neutralizing - ELISA: enzyme-linked immunosorbent assay - FC: flow cytometry - ICC: immunocytochemistry - IF: immunofluorescence - IHC: immunohistochemistry - IHC - F: IHC, frozen section - IHC - P: IHC, paraffin section - IP: immunoprecipitation - WB: western blot.



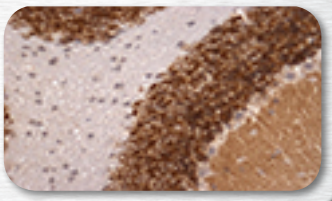
11 avenue Albert Einstein
69100 Villeurbanne – FRANCE

## 4 K⁺ voltage-gated channel subfamily D

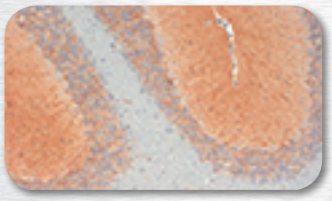
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kv4.2 *(clone S57-1)* | KCND2 | Mouse | Ms, Rat | FC, ICC, IF, IHC, WB | mab60320 |
| Kv4.2 *(clone S57-1)* | KCND2 | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC - P, IP, WB | mab71532 |
| Kv4.2 | KCND2 | Rabbit | Hu | ELISA, ICC, IF, WB | pab0330 |
| Kv4.2 | KCND2 | Rabbit | Hu | ELISA, ICC, IF, WB | pab0330-P |
| Kv4.3 *(clone S75-41)* | KCND3 | Mouse | Hu, Ms, Rat, Xe | FC, ICC, IF, IHC, IP, WB | mab60321 |
| Kv4.3 | KCND3 | Rabbit | Hu | ELISA, IF, WB | pab0291 |
| Kv4.3 | KCND3 | Rabbit | Hu | ELISA, IF, WB | pab0291-P |

**Kv4.2 mab60320**

Anti-Kv4.2 antibody IHC staining of mouse hippocampus showing strong membrane staining of neurons and fibers of cerebellum.



**Kv4.3 mab60321**

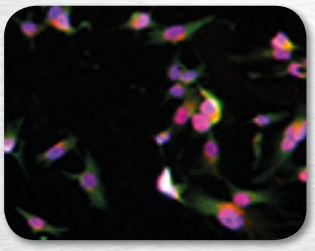


Anti-Kv4.3 antibody IHC staining of mouse cerebellum tissue sections.

## 5 K⁺ voltage-gated channel subfamily E

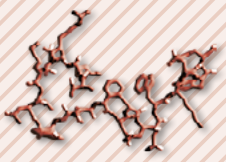
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| K⁺ voltage-gated channel subfamily E member 1 | KCNE1 | Rabbit | Hu | ELISA, ICC, WB | pab0292 |
| K⁺ voltage-gated channel subfamily E member 1 | KCNE1 | Rabbit | Hu | ELISA, ICC, WB | pab0292-P |

**KCNE1 pab0292**



Anti-KCNE1 antibody ICC staining (green) of HepG2 cells. Plasma membrane are stained in red and nuclei in blue (DAPI).

**NEW!**



**KCNE1 blocking peptide**

Use the KCNE1 blocking peptide to reveal the specific staining of the anti-KCNE1 antibodies *(Cat# pab0292 and pab0292-P)*.

| SPECIES | APPLICATIONS | CAT # |
|---|---|---|
| Hu | ELISA, ICC, WB | pep0292 |

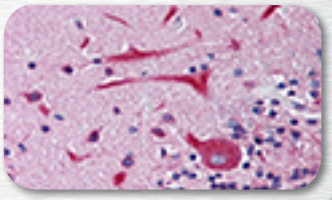
Custom peptide synthesis
http://www.covalab.com/peptide-synthesis

## 6 K⁺ voltage-gated channel subfamily H

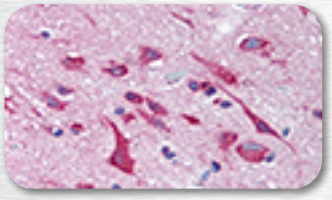
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kv11.1 | KCNH2 | Rabbit | Hu | ELISA, IF, WB | pab0421 |
| Kv11.1 | KCNH2 | Rabbit | Hu | ELISA, IF, WB | pab0421-P |
| Kv11.1 (Internal) | KCNH2 | Rabbit | Hu | IHC - P | pab71571 |
| Kv11.1 (Internal) | KCNH2 | Rabbit | Hu | IHC - P | pab71572 |

**Kv11.1 pab71571**

Anti-Kv11.1 antibody IHC staining of human cerebellum.



**Kv11.1 pab71572**



Anti-Kv11.1 antibody IHC staining of human cortex.

## 7 K⁺ voltage-gated channel subfamily KQT

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kv7.1 *(clone S37A-10)* | KCNQ1 | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, IP, WB | mab60299 |
| Kv7.1 (aa519-549) | KCNQ1 | Rabbit | Hu, Ms | FC, IHC - P, WB | pab76313 |
| Kv7.2 *(clone S26A-23)* | KCNQ2 | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, IP, WB | mab60300 |
| Kv7.2 | KCNQ2 | Rabbit | Hu | ELISA, IF, WB | pab0331 |
| Kv7.2 | KCNQ2 | Rabbit | Hu | ELISA, IF, WB | pab0331-P |
| Kv7.3 | KCNQ3 | Rabbit | Hu | ELISA, IHC, WB | pab0332 |
| Kv7.4 *(clone S43-6)* | KCNQ4 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60301 |
| Kv7.4 | KCNQ4 | Rabbit | Hu | ELISA, ICC, IF, IHC, WB | pab0294 |
| Kv7.4 | KCNQ4 | Rabbit | Hu | ELISA, ICC, IF, IHC, WB | pab0294-P |
| Kv7.5 | KCNQ5 | Rabbit | Hu | ELISA, IF, WB | pab0333 |

## 8 Other K⁺ voltage-gated channels

### Subfamilies K, T and U

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| K⁺ channel subfamily K member 2 - K2p2.1 | KCNK2 | Rabbit | Hu, Ms, Bov | WB | pab50257 |
| K⁺ channel subfamily K member 15 - K2p15.1 | KCNK15 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0793-P |
| K⁺ channel subfamily T member 1 - Slo2 *(clone S3-26)* | KCNT1 | Mouse | Ms, Rat | FC, ICC, IF, IHC, WB | mab60476 |
| K⁺ channel subfamily U member 1 - Slo3 *(clone S2-16)* | KCNU1 | Mouse | Ms | ICC, IF, IHC, IP, WB | mab60477 |



**Applications abbreviations** - **B/N**: blocking/neutralizing - **ELISA**: enzyme-linked immunosorbent assay - **FC**: flow cytometry - **ICC**: immunocytochemistry - **IF**: immunofluorescence - **IHC**: immunohistochemistry - **IHC - F**: IHC, frozen section - **IHC - P**: IHC, paraffin section - **IP**: immunoprecipitation - **WB**: western blot.

11 avenue Albert Einstein
69100 Villeurbanne – FRANCE

# 9 Ca $^{2+}$-activated K $^{+}$ channel subunits

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| K(VCa)α *(clone S6-60)* | KCNMA1 | Mouse | Hu, Ms, Rat, Zfi | FC, ICC, IF, IHC, IP, WB | mab60474 |
| K(VCa)β-2 *(clone S53-32)* | KCNMB2 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60045 |
| K(VCa)β-3 *(clone S40B-18)* | KCNMB3 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60046 |
| K(VCa)β-4 *(clone S18A-3)* | KCNMB4 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60047 |

# 10 Inward rectifier K $^{+}$ channels

## G protein-activated channels

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| GIRK-1 - Kir3.1 | KCNJ3 | Rabbit | Hu | ELISA, IF, WB | pab0322 |
| GIRK-1 - Kir3.1 | KCNJ3 | Rabbit | Hu | ELISA, IF, WB | pab0322-P |
| GIRK-2 - Kir3.2 | KCNJ6 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0321 |
| GIRK-2 - Kir3.2 | KCNJ6 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0321-P |
| GIRK-2 - Kir3.2 (N-terminus) | KCNJ6 | Rabbit | Hu | IHC - P | pab71573 |
| GIRK-2 - Kir3.2 (N-terminus) | KCNJ6 | Rabbit | Hu | IHC - P | pab71574 |
| GIRK-3 - Kir3.3 (Internal) | KCNJ9 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab74173 |
| GIRK-4 - Kir3.4 | KCNJ5 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0323 |

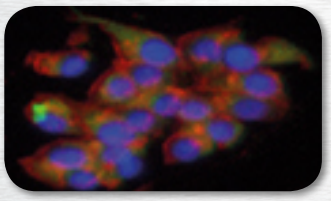
## ATP-sensitive channels

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kir2.2 *(clone S124B/38)* | KCNJ12 | Mouse | Rat | ICC, IF, IHC, WB | mab60305 |
| Kir6.2 (Internal) | KCNJ11 | Goat | Hu | ELISA, IHC - P, WB | pab72704 |
| Kir6.2 (Internal) | KCNJ11 | Goat | Hu, Ms, Rat, Ca | ELISA, IHC - P, WB | pab72705 |
| Kir6.2 (aa190-239) | KCNJ11 | Rabbit | Hu, Ms | ELISA, IF, IHC - P, WB | pab74351 |

## Other inward rectifier channels

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kir2.1 *(clone S112B/14)* | KCNJ2 | Mouse | Ms, Rat | ICC, IF, IHC, WB | mab60304 |
| Kir2.1 | KCNJ2 | Rabbit | Hu, Ms, Rat | ELISA, ICC, IF, IHC, WB | pab0293 |
| Kir2.1 | KCNJ2 | Rabbit | Hu, Ms, Rat | ELISA, ICC, IF, IHC, WB | pab0293-P |
| Kir2.1 | KCNJ2 | Chicken | Hu | ELISA, IHC, WB | pab0366-P |
| Kir2.3 *(clone S25-35)* | KCNJ4 | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, WB | mab60306 |
| Kir5.1 (aa369-418) | KCNJ16 | Rabbit | Ms, Hu | ELISA, IF, IHC - P, WB | pab76297 |
| Kir7.1 (aa74-103) | KCNJ13 | Rabbit | Hu | IHC - P, WB | pab76410 |

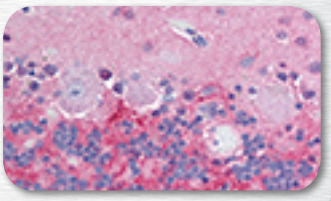
**Kir2.1**
**pab0293**



Anti-Kir2.1 antibody IF staining (green) of PC12 cells. Plasma membranes were counterstained in red and nuclei in blue (DAPI).

**Kir3.2**
**pab71574**

Anti-Kir3.2 antibody IHC staining of human cerebellum.



Phone: +33(0) 437 654 230 - Fax: +33(0) 437 289 416
E-mail: enquiries@covalab.com

**Species abbreviations** - **Bov**: Bovine - **Ca**: Canine - **Hu**: Human - **Mk**: Primate - **Ms**: Mouse - **Rab**: Rabbit - **Xe**: Frog - **Zfi**: Zebrafish.

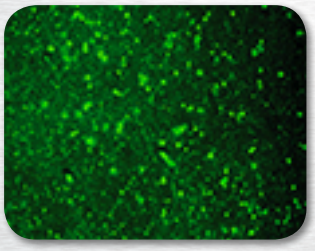
# Calcium channels

## 1 Voltage-dependent $Ca^{2+}$ channels

### L-type channels - Subunits alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Cav1.1 | CACNA1S | Rabbit | Hu | ELISA, IF, WB | pab0589 |
| Cav1.2 *(clone S57-46)* | CACNA1C | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60064 |
| Cav1.2 | CACNA1C | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0420-P |
| Cav1.2 | CACNA1C | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0420 |
| Cav1.2 | CACNA1C | Rabbit | Hu, Ms, Rat, Rab | B/N, IP, WB | pab52502 |
| Cav1.2 (pS1512) | CACNA1C | Rabbit | Hu, Ms, Rat, Rab | ELISA, WB | pab0901-P |
| Cav1.2 (pS1928) | CACNA1C | Rabbit | Hu, Ms, Rat, Rab | ELISA, WB, IP | pab0692 |
| Cav1.3 *(clone S38-8)* | CACNA1D | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, IP, WB | mab60065 |
| Cav1.3 *(clone S48A-9)* | CACNA1D | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, IP, WB | mab60066 |

**Cav1.2 mab60064**



Anti-Cav1.2 antibody IF staining of human hippocampus.

**NEW!**

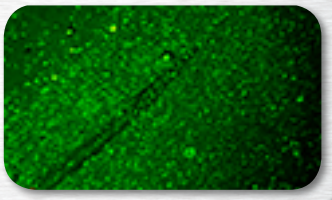
**Cav1.2 (pS1928) blocking peptide**

Use the Cav1.2 (pS1928) blocking peptide to reveal the specific staining of the anti-Cav1.2 (pS1928) antibody *(Cat# pab0692)*.

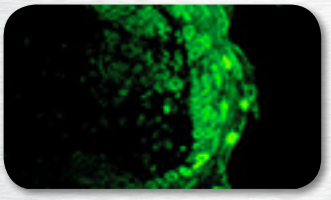
| SPECIES | APPLICATIONS | CAT # |
|---|---|---|
| Hu, Ms, Rat, Rab | ELISA, IP, WB | pep0692 |

**Cav1.3 mab60065**

Anti-Cav1.3 antibody IF staining of rat hippocampal tissue.



**Cav1.3 mab60066**



Anti-Cav1.3 antibody IF staining of mouse backskin tissue.

### L-type channels - Subunits beta

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Cavβ1 *(clone S7-18)* | CACNB1 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60069 |
| Cavβ2 *(clone S8b-1)* | CACNB2 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60070 |
| Cavβ3 | CACNB3 | Rabbit | Hu | ELISA, IF, WB | pab0269-P |
| Cavβ3 | CACNB3 | Rabbit | Hu | ELISA, IF, WB | pab0269 |
| Cavβ4 *(clone S10-7)* | CACNB4 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60071 |

### N-type channels - Subunits alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Cav2.2 | CACNA1B | Rabbit | Hu | ELISA, IF, WB | pab0296-P |
| Cav2.2 | CACNA1B | Rabbit | Hu | ELISA, IF, WB | pab0296 |

**Applications abbreviations** - B/N: blocking/neutralizing - ELISA: enzyme-linked immunosorbent assay - FC: flow cytometry - ICC: immunocytochemistry - IF: immunofluorescence - IHC: immunohistochemistry - IHC - F: IHC, frozen section - IHC - P: IHC, paraffin section - IP: immunoprecipitation - WB: western blot.



11 avenue Albert Einstein
69100 Villeurbanne – FRANCE

## T-type channels - Subunits alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Cav3.1 *(clone S178A-9)* | CACNA1G | Mouse | Hu, Ms, Rat | IHC, WB | mab60067 |
| Cav3.2 *(clone S55-10)* | CACNA1H | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60068 |
| Cav3.2 | CACNA1H | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0781-P |

**NEW!**

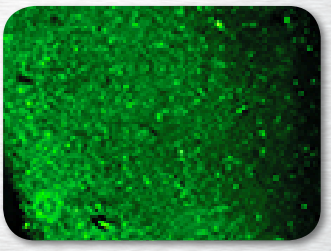
**Cav3.2 blocking peptide**

Use the Cav3.2 blocking peptide to reveal the specific staining of the anti-Cav3.2 antibody *(Cat# pab0781-P)*.

| SPECIES | APPLICATIONS | CAT # |
|---|---|---|
| Hu, Ms, Rat | ELISA, IF, WB | pep0781 |

**Cav3.2 mab60068**

Anti-Cav3.2 antibody IF staining of human hippocampus.



## Subunits alpha/delta

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Voltage-dependent $Ca^{2+}$ channel subunit alpha-2/delta-1 | CACNA2D1 | Rabbit | Hu, Ms, Rat | ELISA, IHC, WB | pab0268 |
| Voltage-dependent $Ca^{2+}$ channel subunit alpha-2/delta-1 | CACNA2D1 | Rabbit | Hu, Ms, Rat | ELISA, IHC, WB | pab0268-P |

# 2 Transient receptor potential cation channels

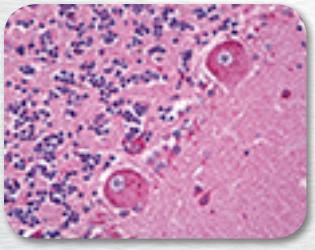
## Subfamily A

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| TRPA1 | TRPA1 | Rabbit | Hu, Ms | ICC, IF, IHC, WB | pab50243 |

## Subfamily C

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| TRPC1 | TRPC1 | Rabbit | Hu | ELISA, IF, WB | pab0362 |
| TRPC1 | TRPC1 | Rabbit | Hu | ELISA, IF, WB | pab0362-P |
| TRPC4 *(clone S77-15)* | TRPC4 | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, WB | mab60525 |
| TRPC5 *(clone S67-15)* | TRPC5 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60526 |
| TRPC7 *(clone S64A-36)* | TRPC7 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60527 |

**TRPC5 mab60526**



Anti-TRPC5 antibody IHC staining of human cerebellum.

**NEW!**

**TRPC1 blocking peptide**

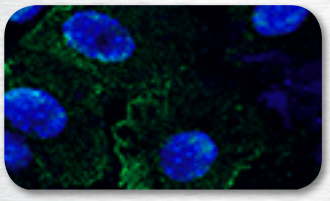
Use the TRPC1 blocking peptide to reveal the specific staining of the anti-TRPC1 antibodies *(Cat# pab0362 and pab0362-P)*.

| SPECIES | APPLICATIONS | CAT # |
|---|---|---|
| Hu | ELISA, IF, WB | pep0362 |

## Subfamily M

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| TRPM3 | TRPM3 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0626 |
| TRPM3 | TRPM3 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0626-P |
| TRPM4 | TRPM4 | Rabbit | Ms, Rat | ELISA, ICC, WB | pab0563 |
| TRPM7 *(clone S74-25)* | TRPM7 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60528 |
| TRPM7 | TRPM7 | Rabbit | Ms | ELISA, ICC, WB | pab0564 |
| TRPM8 | TRPM8 | Rabbit | Hu, Ms | ELISA, ICC, WB | pab0613 |
| TRPM8 | TRPM8 | Rabbit | Hu, Ms | ELISA, ICC, WB | pab0613-P |

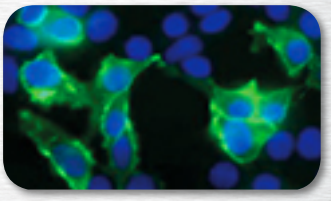
**TRPM7 mab60528**



Anti-TRPM7 antibody ICC staining (green) of cultured mouse urothelial cells. Nuclei were counterstained with DAPI (blue).

**TRPV3 mab60529**

Anti-TRPV3 antibody ICC staining (green) of transfected HEK293 cells. Nuclei were counterstained with DAPI (blue).



## Subfamily V

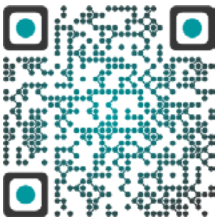
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| TRPV3 *(clone S15-4)* | TRPV3 | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60530 |
| TRPV3 *(clone S15-39)* | TRPV3 | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, IP, WB | mab60529 |
| TRPV3 | TRPV3 | Rabbit | Hu | ELISA, ICC, WB | pab0497 |
| TRPV3 | TRPV3 | Rabbit | Hu | ELISA, ICC, WB | pab0497-P |

# 3 Two pore channels

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Two pore $Ca^{2+}$ channel protein 2 | TPCN2 | Rabbit | Zfi | ELISA, WB | pab0908-P |
| Two pore $Ca^{2+}$ channel protein 3 | TPC3 | Rabbit | Zfi | ELISA, WB | pab0868-P |

## Scan me

to learn more about ion channels!



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

**Applications abbreviations** - **B/N**: blocking/neutralizing - **ELISA**: enzyme-linked immunosorbent assay - **FC**: flow cytometry - **ICC**: immunocytochemistry - **IF**: immunofluorescence - **IHC**: immunohistochemistry - **IHC - F**: IHC, frozen section - **IHC - P**: IHC, paraffin section - **IP**: immunoprecipitation - **WB**: western blot.



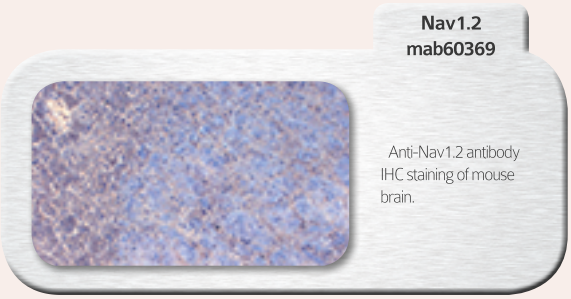
11 avenue Albert Einstein
69100 Villeurbanne – FRANCE

# Sodium channels

## Sodium channel proteins

### Type 1 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.1 *(clone S74-71)* | SCN1A | Mouse | Hu, Ms, Rat | ICC, IF, IHC, WB | mab60368 |
| Nav1.1 | SCN1A | Rabbit | Hu | ELISA, IHC, WB | pab0276 |
| Nav1.1 | SCN1A | Rabbit | Hu, Ms, Rat | ELISA, IHC, WB | pab0276-P |


### Type 2 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.2 (clone S69-3) | SCN2A | Mouse | Hu, Ms, Rat | ICC, IF, IHC, IP, WB | mab60369 |
| Nav1.2 | SCN2A | Rabbit | Hu | ELISA, ICC, IF, WB | pab0278 |

### Type 3 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.3 | SCN3A | Rabbit | Hu | ELISA, IF, WB | pab0279 |
| Nav1.3 | SCN3A | Rabbit | Hu | ELISA, IF, WB | pab0279-P |

### Type 4 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.4 | SCN4A | Rabbit | Hu, Ms, Rat | ELISA, IHC, WB | pab0280 |

### Type 5 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.5 | SCN5A | Rabbit | Hu | ELISA, IF, WB | pab0281 |
| Nav1.5 | SCN5A | Rabbit | Hu | ELISA, IF, WB | pab0281-P |

### Type 7 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nax | SCN7A | Rabbit | Hu, Ms, Rat | ELISA, ICC, IF, IHC, WB | pab0315 |
| Nax | SCN7A | Rabbit | Hu, Ms, Rat | ELISA, ICC, IF, IHC, WB | pab0315-P |

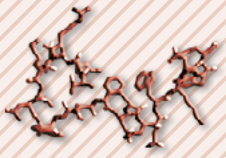
## Type 8 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.6 *(clone S87A-10)* | SCN8A | Mouse | Hu, Ms, Rat | IHC | mab60367 |
| Nav1.6 | SCN8A | Rabbit | Hu | ELISA, IF, WB | pab0282 |
| Nav1.6 | SCN8A | Rabbit | Hu | ELISA, IF, WB | pab0282-P |

## Type 9 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.7 | SCN9A | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0283 |
| Nav1.7 | SCN9A | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0283-P |

**NEW!**



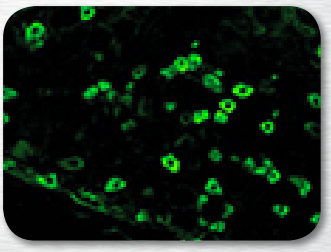
**Nav1.7 blocking peptide**

Use the Nav1.7 blocking peptide to reveal the specific staining of the anti-Nav1.7 antibodies *(Cat# pab0283 and pab0283-P)*.

| SPECIES | APPLICATIONS | CAT # |
|---|---|---|
| Hu, Ms, Rat | ELISA, IHC, WB | pep0283 |

**Nav1.8 mab60370**

Anti-Nav1.8 antibody IF staining of rat dorsal root ganglia cryosections.



## Type 10 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.8 (clone S134-12) | SCN10A | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, WB | mab60370 |
| Nav1.8 | SCN10A | Rabbit | Hu | ELISA, FC, IF, WB | pab0336 |
| Nav1.8 | SCN10A | Rabbit | Hu | ELISA, FC, IF, WB | pab0336-P |

## Type 11 - Subunit alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Nav1.9 | SCN11A | Rabbit | Hu | ELISA, IF, WB | pab0277 |

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

**Applications abbreviations** - **B/N**: blocking/neutralizing - **ELISA**: enzyme-linked immunosorbent assay - **FC**: flow cytometry - **ICC**: immunocytochemistry - **IF**: immunofluorescence - **IHC**: immunohistochemistry - **IHC - F**: IHC, frozen section - **IHC - P**: IHC, paraffin section - **IP**: immunoprecipitation - **WB**: western blot.



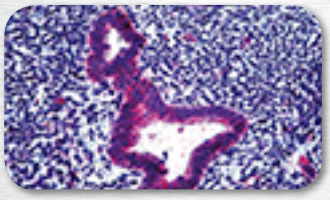
11 avenue Albert Einstein
69100 Villeurbanne – FRANCE

# Chloride channels

## 1 $Cl^-$ channel proteins

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| $Cl^-$ channel protein 2 (aa738-751) | CLCN2 | Goat | Hu, Ms, Rat | IHC - P | pab73577 |
| $Cl^-$ channel protein 3 *(clone S258-5)* | CLCN3 | Mouse | Hu, Ms, Rat | IHC, WB | mab60095 |
| $Cl^-$ channel protein ClC-Kb | CLCNKB | Rabbit | Ms | ELISA, IHC, WB | pab0307 |

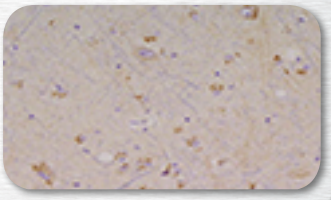
**CLCN2 pab73577**



Anti-$Cl^-$ channel protein 2 antibody IHC staining of human uterus.

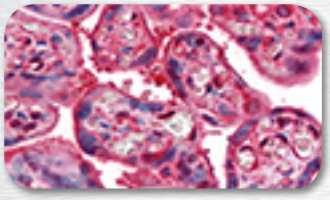
**CLCN3 mab60095**

Anti-$Cl^-$ channel protein 3 antibody IHC staining of human hippocampus.



## 2 $Cl^-$ intracellular channel proteins

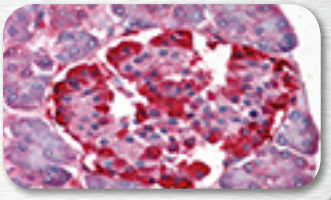
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| CLIC1 *(clone 2D4)* | CLIC1 | Mouse | Hu | ELISA, IHC - P, WB | mab70593 |
| CLIC1 *(clone 3F9)* | CLIC1 | Mouse | Hu | ELISA, IHC - P, WB | mab70594 |
| CLIC1 | CLIC1 | Rabbit | Hu | ELISA, ICC, WB | pab0342 |
| CLIC4 (N-terminus) | CLIC4 | Goat | Hu, Ms, Rat, Ca | ELISA, IF, IHC - P, WB | pab72371 |
| CLIC4 (N-terminus) | CLIC4 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab74379 |
| CLIC5 *(clone 1E6)* | CLIC5 | Mouse | Hu | ELISA, IHC - P, WB | mab71069 |
| CLIC5a *(clone CLIC5-02)* | CLIC5a | Mouse | Hu | FC, WB | mab20436 |
| CLIC5a *(clone CLIC5-02)* [PE] | CLIC5a | Mouse | Hu | FC, WB | mab21112 |



Anti-CLIC1 antibody IHC staining of human placenta.

**CLIC1 mab70593**

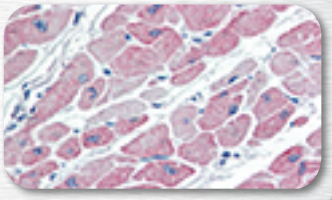
Anti-CLIC1 antibody IHC staining of human pancreas.



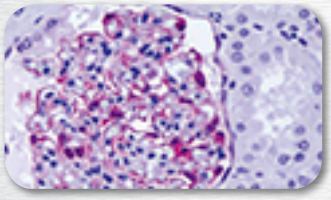
**CLIC1 mab70594**

**CLIC4 pab72371**

Anti-CLIC4 antibody IHC staining of human heart.



**CLIC5 mab71069**



Anti-CLIC5 antibody IHC staining human kidney glomeruli.

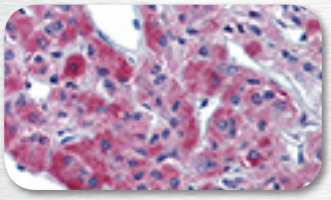
Phone: +33(0) 437 654 230 - Fax: +33(0) 437 289 416
E-mail: enquiries@covalab.com

**Species abbreviations** - **Bov**: Bovine - **Ca**: Canine - **Hu**: Human - **Mk**: Primate - **Ms**: Mouse - **Rab**: Rabbit - **Xe**: Frog - **Zfi**: Zebrafish.

# Zinc channels

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| $Zn^{2+}$ transporter ZIP3 (Internal) | SLC39A3 | Rabbit | Hu, Ms | ELISA, IHC - P, WB | pab73248 |
| $Zn^{2+}$ transporter ZIP6 (N-terminus) | SLC39A6 | Rabbit | Hu, Ms, Rat | IHC - P | pab73252 |
| $Zn^{2+}$ transporter ZIP6 (Internal) | SLC39A6 | Rabbit | Hu | IHC - P | pab73250 |
| $Zn^{2+}$ transporter ZIP6 (Internal) | SLC39A6 | Rabbit | Hu | IHC - P | pab73251 |
| $Zn^{2+}$ transporter ZIP7 (N-terminus) | SLC39A7 | Rabbit | Hu | ELISA, IHC - P, WB | pab73253 |
| $Zn^{2+}$ transporter ZIP10 (Internal) | SLC39A10 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab73240 |
| $Zn^{2+}$ transporter ZIP10 (Internal) | SLC39A10 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab73241 |
| $Zn^{2+}$ transporter ZIP11 (Internal) | SLC39A11 | Rabbit | Hu | ELISA, IHC - P, WB | pab73242 |
| $Zn^{2+}$ transporter ZIP14 (Internal) | SLC39A14 | Rabbit | Hu | IHC - P | pab73244 |
| $Zn^{2+}$ transporter ZIP14 (Internal) | SLC39A14 | Rabbit | Hu | IHC - P | pab73245 |
| $Zn^{2+}$ transporter ZIP14 (Internal) | SLC39A14 | Rabbit | Hu | IHC - P | pab73246 |
| $Zn^{2+}$ transporter ZIP14 (Internal) | SLC39A14 | Rabbit | Hu, Ms | IHC - P, WB | pab73247 |
| $Zn^{2+}$ transporter ZIP14 (Cytoplasmic domain) | SLC39A14 | Rabbit | Hu | IHC - P | pab73243 |

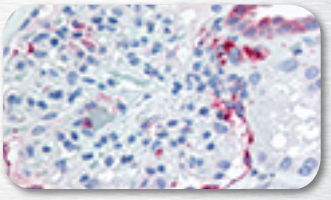
**ZIP11**
**pab73242**



Anti-$Zn^{2+}$ transporter ZIP11 antibody IHC staining of human adrenal.

**ZIP14**
**pab73245**

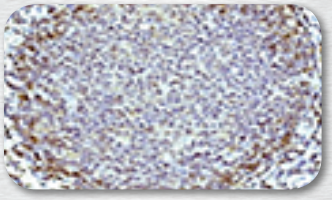
Anti-$Zn^{2+}$ transporter ZIP14 antibody IHC staining of human kidney.



# Hydrogen channels

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Voltage-gated hydrogen channel 1 | HVCN1 | Rabbit | Hu | ELISA, ICC, IHC, WB | pab0493 |

**HVCN1**
**pab0493**



Anti-HVCN1 antibody IHC staining of mouse tonsil section.



**Applications abbreviations** - **B/N**: blocking/neutralizing - **ELISA**: enzyme-linked immunosorbent assay - **FC**: flow cytometry - **ICC**: immunocytochemistry - **IF**: immunofluorescence - **IHC**: immunohistochemistry - **IHC - F**: IHC, frozen section - **IHC - P**: IHC, paraffin section - **IP**: immunoprecipitation - **WB**: western blot.

11 avenue Albert Einstein
69100 Villeurbanne – FRANCE

# Multi-ion channels

## 1 $K^+$ / $Na^+$ HCN channels

### Hyperpolarization-activated cyclic nucleotide-gated channel 1

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| HCN1 *(clone S70-28)* | HCN1 | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC , IP, WB | mab60206 |
| HCN1 | HCN1 | Rabbit | Hu | ELISA, IF, WB | pab0317 |
| HCN1 | HCN1 | Rabbit | Hu | ELISA, IF, WB | pab0317-P |

### Hyperpolarization-activated cyclic nucleotide-gated channel 2

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| HCN2 *(clone S71-37)* | HCN2 | Mouse | Ms, Rat | ICC, IF, IHC, IP, WB | mab60207 |
| HCN2 | HCN2 | Rabbit | Hu | ELISA, IF, WB | pab0318 |
| HCN2 | HCN2 | Rabbit | Hu | ELISA, IF, WB | pab0318-P |

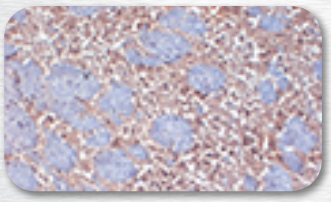
### Hyperpolarization-activated cyclic nucleotide-gated channel 3

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| HCN3 *(clone S141-28)* | HCN3 | Mouse | Ms, Rat | ICC, IF, IHC, WB | mab60208 |
| HCN3 | HCN3 | Rabbit | Hu | ELISA, IF, WB | pab0319 |
| HCN3 | HCN3 | Rabbit | Hu | ELISA, IF, WB | pab0319-P |

### Hyperpolarization-activated cyclic nucleotide-gated channel 4

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| HCN4 *(clone S114-10)* | HCN4 | Mouse | Hu, Ms, Rat | FC, ICC, IF, IHC, IP, WB | mab60209 |
| HCN4 | HCN4 | Rabbit | Hu | ELISA, ICC, IF, IHC, WB | pab0320 |
| HCN4 | HCN4 | Rabbit | Hu | ELISA, ICC, IF, IHC, WB | pab0320-P |

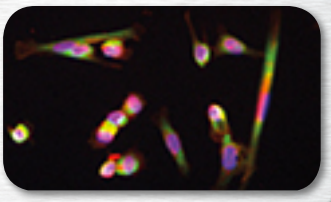
**HCN2 mab60207**



Anti-HCN2 antibody IHC staining of mouse brain.

**HCN4 pab0320**

Anti-HCN4 antibody ICC staining (green) of SKNSH cells. Plasma membranes were counterstained in red and nuclei in blue (DAPI)



## 2 $K^+$ / $Cl^-$ cotransporter

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| $K^+$ / $Cl^-$ cotransporter 2 *(clone S1-12)* | KCC2 | Mouse | Hu, Ms, Rat | IHC, WB | mab60295 |

Phone: +33(0) 437 654 230 - Fax: +33(0) 437 289 416
E-mail: enquiries@covalab.com

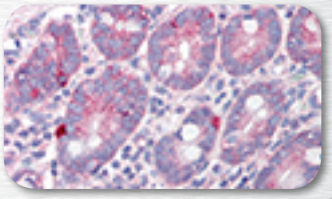
**Species abbreviations** - **Bov**: Bovine - **Ca**: Canine - **Hu**: Human - **Mk**: Primate - **Ms**: Mouse - **Rab**: Rabbit - **Xe**: Frog - **Zfi**: Zebrafish.

## 3 Na⁺ / H⁺ exchanger

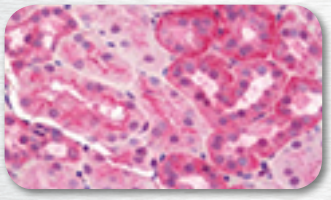
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Na⁺ / H⁺ exchanger 1 (C-Terminus) | SLC9A1 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab73287 |
| Na⁺ / H⁺ exchanger 1 | SLC9A1 | Rabbit | Hu | FC, ICC, IHC - P, WB | pab77695 |

**Na⁺/H⁺ exch. 1 pab73287**

Anti-Na⁺/H⁺ exchanger 1 antibody IHC staining of human small intestine.



**Na⁺/H⁺ exch. 1 pab77695**

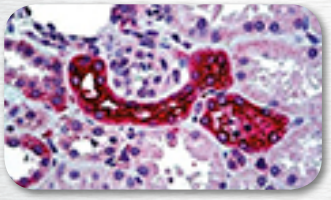


Anti-Na⁺/H⁺ exchanger 1 antibody IHC staining of human kidney.

## 4 Na⁺ / K⁺ / Cl⁻ symporters

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Kidney-specific Na⁺ / K⁺ / Cl⁻ symporter (aa43-57) | SLC12A1 | Goat | Hu | IHC - P | pab73567 |
| Basolateral Na⁺ / K⁺ / Cl⁻ symporter *(clone 5H7)* | SLC12A2 | Mouse | Hu | ELISA, IHC - P, WB | mab71089 |
| Basolateral Na⁺ / K⁺ / Cl⁻ symporter (Internal) | SLC12A2 | Goat | Hu, Ms, Rat, Bov, Ca | ELISA, IHC - P | pab73838 |

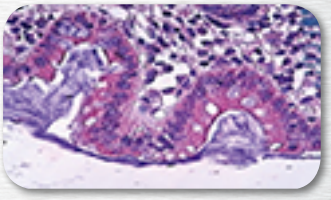
**SLC12A1 pab73567**



Anti-SLC12A1 antibody IHC staining of human kidney.

**SLC12A2 pab73838**

Anti-SLC12A2 antibody IHC staining of human colon epithelium.





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

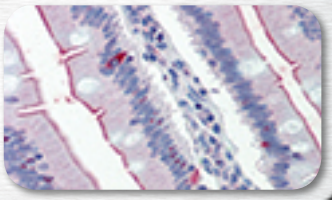
# Ion-dependent macromolecules transporters

## 1 Na⁺ / Macromolecule cotransporters

### Na⁺/ glucose cotransporters

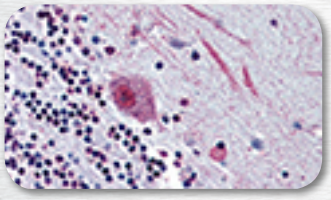
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Na⁺ / glucose cotransporter 1 | SLC5A1 | Rabbit | Hu | IHC - P, WB | pab75209 |
| Na⁺ / glucose cotransporter 1 (N-terminus) | SLC5A1 | Rabbit | Hu | IHC - P | pab73261 |
| Na⁺ / glucose cotransporter 1 (Internal) | SLC5A1 | Rabbit | Hu | IHC - P | pab73259 |
| Na⁺ / glucose cotransporter 1 (Internal) | SLC5A1 | Rabbit | Hu | IHC - P | pab73260 |
| Na⁺ / glucose cotransporter 2 (C-terminus) | SLC5A2 | Rabbit | Hu | IHC - P | pab73265 |
| Na⁺ / glucose cotransporter 4 (Internal) | SLC5A9 | Rabbit | Hu | IHC - P | pab73278 |
| Na⁺ / glucose cotransporter 4 (C-terminus) | SLC5A9 | Rabbit | Hu | IHC - P | pab73275 |
| Na⁺ / glucose cotransporter 4 (C-terminus) | SLC5A9 | Rabbit | Hu | IHC - P | pab73276 |
| Na⁺ / glucose cotransporter 4 (Cytoplasmic domain) | SLC5A9 | Rabbit | Hu | IHC - P | pab73277 |
| Na⁺ / glucose cotransporter 5 (Cytoplasmic domain) | SLC5A10 | Rabbit | Hu | IHC - P | pab73262 |
| Low affinity Na⁺ / glucose cotransporter (C-terminus) | SLC5A4 | Rabbit | Hu | IHC - P | pab73270 |

**SLC5A1 pab73260**



Anti-SLC5A1 antibody IHC staining of human small intestine.

**SLC5A9 pab73278**

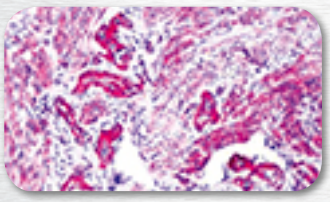


Anti-SLC5A9 antibody IHC staining of human cerebellum.

### Na⁺/ myo-inositol cotransporters

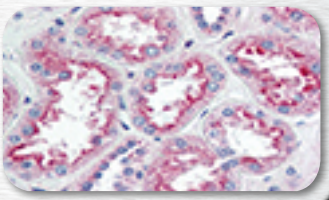
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Na⁺ / myo-inositol cotransporter (Internal) | SLC5A3 | Rabbit | Hu | IHC - P | pab73268 |
| Na⁺ / myo-inositol cotransporter (Internal) | SLC5A3 | Rabbit | Hu | IHC - P | pab73269 |
| Na⁺ / myo-inositol cotransporter (Internal) | SLC5A3 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab73364 |
| Na⁺ / myo-inositol cotransporter (C-Terminus) | SLC5A3 | Rabbit | Hu | IHC - P | pab73266 |
| Na⁺ / myo-inositol cotransporter (C-Terminus) | SLC5A3 | Rabbit | Hu | IHC - P | pab73267 |
| Na⁺ / myo-inositol cotransporter 2 (Internal) | SLC5A11 | Rabbit | Hu | IHC - P | pab73264 |
| Na⁺ / myo-inositol cotransporter 2 (Extracellular Domain) | SLC5A11 | Rabbit | Hu | IHC - P | pab73263 |

**SLC5A3 pab73364**



Anti-SLC5A3 antibody IHC staining of human uterus.

**SLC5A11 pab73264**



Anti-SLC5A11 antibody IHC staining of human kidney.

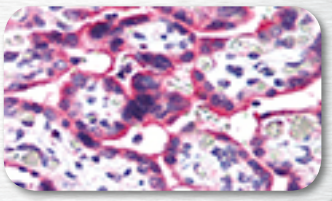
### Other Na⁺/ macromolecule cotransporters

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Ileal Na⁺/ bile acid cotransporter (C-Terminus) | SLC10A2 | Goat | Hu | ELISA, IHC - P | pab74208 |
| Na⁺ / citrate cotransporter *(clone 2G4)* | SLC13A5 | Mouse | Hu | ELISA, IHC - P, WB | mab70991 |

## 2 Na⁺ / Cl⁻-dependent macromolecule transporters

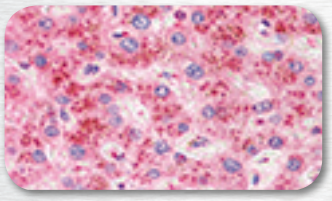
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Na⁺-dependent multivitamin transporter (N-Terminus) | SLC5A6 | Rabbit | Hu | IHC - P | pab73274 |
| Na⁺-dependent multivitamin transporter (Internal) | SLC5A6 | Rabbit | Hu | IHC - P | pab73271 |
| Na⁺-dependent multivitamin transporter (Internal) | SLC5A6 | Rabbit | Hu | IHC - P | pab73272 |
| Na⁺-dependent multivitamin transporter (Internal) | SLC5A6 | Rabbit | Hu | IHC - P | pab73273 |
| Na⁺- and Cl⁻-dependent betaine transporter (C-Terminus) | SLC6A12 | Goat | Hu, Mk | ELISA, IHC - P, WB | pab76462 |
| Na⁺- and Cl⁻-dependent GABA transporter 1 (aa372-421) | SLC6A1 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab77558 |
| Na⁺- and Cl⁻-dependent taurine transporter (C-Terminus) | SLC6A6 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P | pab73786 |

**SLC5A6 pab73273**



Anti-SLC5A6 antibody IHC staining of human placenta.

**SLC6A12 pab76462**

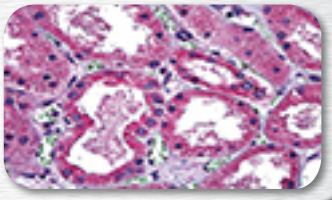


Anti-SLC6A12 antibody IHC staining of human liver.

## 3 Other macromolecule transporters

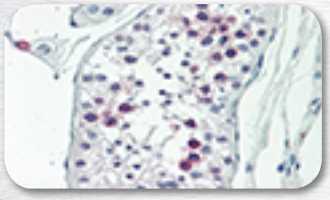
| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Anion exchange transporter *(clone 14H5)* | SLC26A7 | Mouse | Ms | IF, WB | mab50098 |
| Natural resistance-associated macrophage protein 1 (aa256-285) | SLC11A1 | Rabbit | Hu | IF, IHC - P, WB | pab76792 |
| Natural resistance-associated macrophage protein 2 *(clone 4C6)* | SLC11A2 | Mouse | Hu | ELISA, IHC - P, WB | mab70885 |
| Organic anion transporter 1 (aa520-549) | SLC22A6 | Rabbit | Hu | FC, IHC - P, WB | pab76965 |
| Organic cation transporter 3 (aa275-324) | SLC22A3 | Rabbit | Hu | ELISA, IHC - P, WB | pab76126 |
| Organic cation/carnitine transporter 1 (aa514-542) | SLC22A4 | Rabbit | Hu | IHC - P, WB | pab76521 |
| Organic cation/carnitine transporter 2 (aa282-331) | SLC22A5 | Rabbit | Hu | ELISA, IHC - P, WB | pab77283 |
| Organic cation/carnitine transporter 6 (aa101-150) | SLC22A16 | Rabbit | Hu | IHC - P, WB | pab77298 |

Anti-SLC11A2 antibody IHC staining of human kidney.



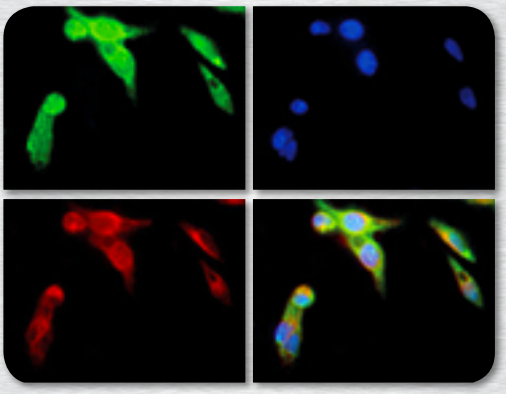
**SLC11A2 mab70885**

**SLC22A16 pab77298**



Anti-SLC22A16 antibody IHC staining of human testis.

**SLC26A7 mab50098**



Anti-SLC26A7 antibody IF staining (green) of HepG2 cells. Nuclei were counterstained with DAPI (blue) and alpha-tubulin with Dylight 550 (red).



**Applications abbreviations** - **B/N**: blocking/neutralizing - **ELISA**: enzyme-linked immunosorbent assay - **FC**: flow cytometry - **ICC**: immunocytochemistry - **IF**: immunofluorescence - **IHC**: immunohistochemistry - **IHC - F**: IHC, frozen section - **IHC - P**: IHC, paraffin section - **IP**: immunoprecipitation - **WB**: western blot.

11 avenue Albert Einstein
69100 Villeurbanne – FRANCE

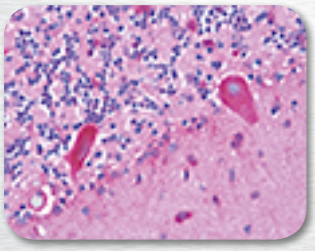
# Ligand-gated ion channels

## Acetylcholine receptor protein subunits

### Subunits alpha

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Acetylcholine receptor protein subunit α precursor | CHRNA1 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0264 |
| Acetylcholine receptor protein subunit α precursor | CHRNA1 | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0264-P |
| Neuronal acetylcholine receptor subunit α-3 | CHRNA3 | Rabbit | Hu | ELISA, IHC, WB | pab0266 |
| Neuronal acetylcholine receptor subunit α-5 | CHRNA5 | Goat | Hu | ELISA, IHC - P, WB | pab75645 |
| Neuronal acetylcholine receptor subunit α-6 | CHRNA6 | Rabbit | Hu, Ms | ELISA, IF, WB | pab0262 |
| Neuronal acetylcholine receptor subunit α-6 | CHRNA6 | Goat | Hu, Bov, Ca | IHC - P | pab73883 |
| Neuronal acetylcholine receptor subunit α-7 | CHRNA7 | Goat | Hu, Bov, Ca, Ms, Rat | ELISA, IHC - P | pab72821 |
| Neuronal acetylcholine receptor subunit α-9 | CHRNA9 | Rabbit | Hu | FC, IHC - P, WB | pab77715 |
| Neuronal acetylcholine receptor subunit α-10 | CHRNA10 | Rabbit | Hu, Ms, Rat | ELISA, IHC - P, WB | pab76907 |
| Neuronal acetylcholine receptor subunit α-10 | CHRNA10 | Rabbit | Hu | IHC - P, WB | pab77713 |

**CHRNA10**
**pab76907**



Anti-CHRNA10 antibody IHC staining of human cerebellum.

**NEW!**

**CHRNA1**
**blocking peptide**

Use the CHRNA1 blocking peptide to reveal the specific staining of the anti-CHRNA1 antibodies *(Cat# pab0264 and pab0264-P)*.

| SPECIES | APPLICATIONS | CAT # |
|---|---|---|
| Hu, Ms, Rat | ELISA, IHC, WB | pep0264 |

### Subunits beta

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Acetylcholine receptor protein subunit beta precursor | CHRNB1 | Rabbit | Hu, Ms, Rat | ELISA, ICC, WB | pab0298 |
| Acetylcholine receptor protein subunit beta precursor | CHRNB1 | Rabbit | Hu, Ms, Rat | ELISA, ICC, WB | pab0298-P |
| Neuronal acetylcholine receptor subunit beta-2 | CHRNB2 | Rabbit | Hu | ELISA, IF, WB | pab0263 |
| Neuronal acetylcholine receptor subunit beta-2 | CHRNB2 | Rabbit | Hu | ELISA, IF, WB | pab0263-P |
| Neuronal acetylcholine receptor subunit beta-2 | CHRNB2 | Goat | Hu | ELISA, IHC - P, WB | pab75593 |
| Neuronal acetylcholine receptor subunit beta-4 | CHRNB4 | Rabbit | Hu | ELISA, IF, WB | pab0267 |
| Neuronal acetylcholine receptor subunit beta-4 | CHRNB4 | Rabbit | Hu | ELISA, IF, WB | pab0267-P |
| Neuronal acetylcholine receptor subunit beta-4 | CHRNB4 | Goat | Hu, Mk | ELISA, IHC - P | pab73940 |

### Subunits delta and epsilon

| ANTIBODY TARGET | GENE | HOST | SPECIES | APPLICATIONS | CAT # |
|---|---|---|---|---|---|
| Acetylcholine receptor subunit delta | CHRND | Rabbit | Hu, Ms, Rat | ELISA, IF, WB | pab0297 |
| Acetylcholine receptor subunit epsilon | CHRNE | Rabbit | Hu, Ms | ELISA, IF, WB | pab0265 |

Covalab, more than a partner since 1995

# 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)

## 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.

**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
E-mail for order: orders@covalab.com
Web: www.covalab.com