

KCNN4 / KCa3.1 Antibody (N-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS11126**Specification**

KCNN4 / KCa3.1 Antibody (N-Terminus) - Product Information

Application	IHC
Primary Accession	O15554
Reactivity	Human, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	48kDa KDa

KCNN4 / KCa3.1 Antibody (N-Terminus) - Additional Information**Gene ID** 3783**Other Names**

Intermediate conductance calcium-activated potassium channel protein 4, SK4, SKCa 4, SKCa4, IKCa1, IK1, KCa3.1, KCa4, Putative Gardos channel, KCNN4, IK1, IKCA1, KCA4, SK4

Target/Specificity

Human KCNN4. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Long term: -70°C; Short term: +4°C

Precautions

KCNN4 / KCa3.1 Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

KCNN4 / KCa3.1 Antibody (N-Terminus) - Protein Information**Name** KCNN4 ([HGNC:6293](#))**Synonyms** IK1, IKCA1, KCA4, SK4**Function**

Intermediate conductance calcium-activated potassium channel that mediates the voltage-independent transmembrane transfer of potassium across the cell membrane through a constitutive interaction with calmodulin which binds the intracellular calcium allowing its opening (PubMed: [10026195](http://www.uniprot.org/citations/10026195), PubMed: [10961988](http://www.uniprot.org/citations/10961988), PubMed: [11425865](http://www.uniprot.org/citations/11425865), PubMed: [15831468](http://www.uniprot.org/citations/15831468), PubMed: [17157250](http://www.uniprot.org/citations/17157250), PubMed: [18796614](http://www.uniprot.org/citations/18796614)),

PubMed:26148990, PubMed:9326665, PubMed:9380751, PubMed:9407042). The current is characterized by a voltage-independent activation, an intracellular calcium concentration increase-dependent activation and a single- channel conductance of about 25 picosiemens (PubMed:9326665, PubMed:9380751, PubMed:9407042). Also presents an inwardly rectifying current, thus reducing its already small outward conductance of potassium ions, which is particularly the case when the membrane potential displays positive values, above + 20 mV (PubMed:9326665, PubMed:9380751, PubMed:9407042). Controls calcium influx during vascular contractility by being responsible of membrane hyperpolarization induced by vasoactive factors in proliferative vascular smooth muscle cell types (By similarity). Following calcium influx, the consecutive activation of KCNN4 channel leads to a hyperpolarization of the cell membrane potential and hence an increase of the electrical driving force for further calcium influx promoting sustained calcium entry in response to stimulation with chemotactic peptides (PubMed:26418693). Required for maximal calcium influx and proliferation during the reactivation of naive T-cells (PubMed:17157250, PubMed:18796614). Plays a role in the late stages of EGF-induced macropinocytosis through activation by PI(3)P (PubMed:24591580).

Cellular Location

Cell membrane; Multi-pass membrane protein. Cell projection, ruffle membrane. Note=Targeted to membrane ruffles after EGF stimulation.

Tissue Location

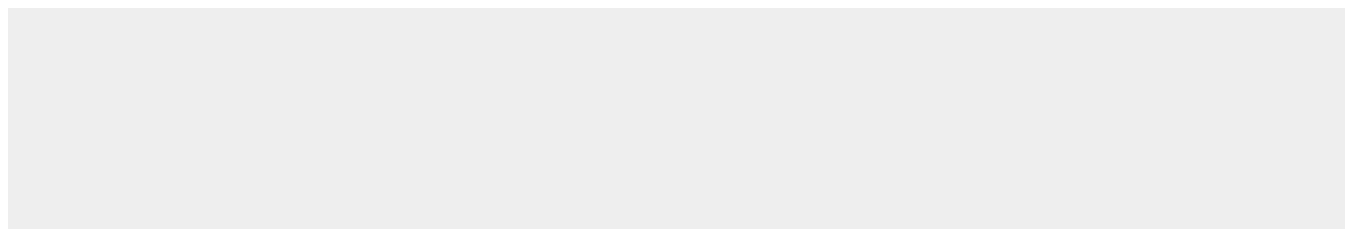
Widely expressed in non-excitabile tissues.

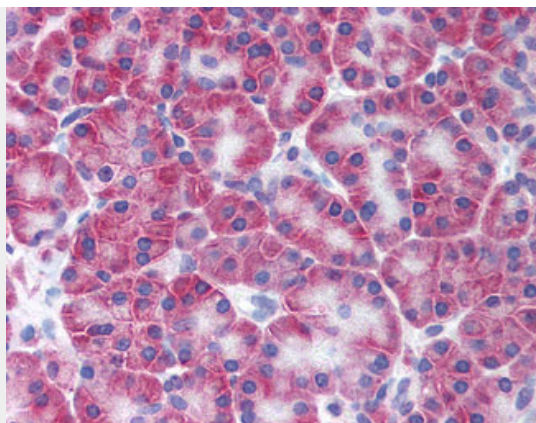
KCNN4 / KCa3.1 Antibody (N-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KCNN4 / KCa3.1 Antibody (N-Terminus) - Images





Anti-KCNN4 antibody ALS11126 IHC of human pancreas.

KCNN4 / KCa3.1 Antibody (N-Terminus) - Background

Forms a voltage-independent potassium channel that is activated by intracellular calcium. Activation is followed by membrane hyperpolarization which promotes calcium influx. Required for maximal calcium influx and proliferation during the reactivation of naive T-cells. The channel is blocked by clotrimazole and charybdotoxin but is insensitive to apamin.

KCNN4 / KCa3.1 Antibody (N-Terminus) - References

Joiner W.J., et al. Proc. Natl. Acad. Sci. U.S.A. 94:11013-11018(1997).
Ishii T.M., et al. Proc. Natl. Acad. Sci. U.S.A. 94:11651-11656(1997).
Logsdon N.J., et al. J. Biol. Chem. 272:32723-32726(1997).
Ghanshani S., et al. Genomics 51:160-161(1998).
Ghanshani S., et al. J. Biol. Chem. 275:37137-37149(2000).