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KCNN4 / KCa3.1 Antibody (aa227-239)

Goat Polyclonal Antibody
Catalog # ALS13863

Specification

KCNN4 / KCa3.1 Antibody (aa227-239) - Product Information

Application	**IHC-P**
Primary Accession	O15554
Reactivity	**Human, Rabbit, Bovine, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**48kDa KDa**
Dilution	**IHC-P~~N/A**

KCNN4 / KCa3.1 Antibody (aa227-239) - 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.

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

Precautions
KCNN4 / KCa3.1 Antibody (aa227-239) is for research use only and not for use in diagnostic or therapeutic procedures.

KCNN4 / KCa3.1 Antibody (aa227-239) - 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, PubMed:10961988, PubMed:11425865, PubMed:15831468, PubMed:17157250, PubMed: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-excitable tissues.

KCNN4 / KCa3.1 Antibody (aa227-239) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KCNN4 / KCa3.1 Antibody (aa227-239) - Images

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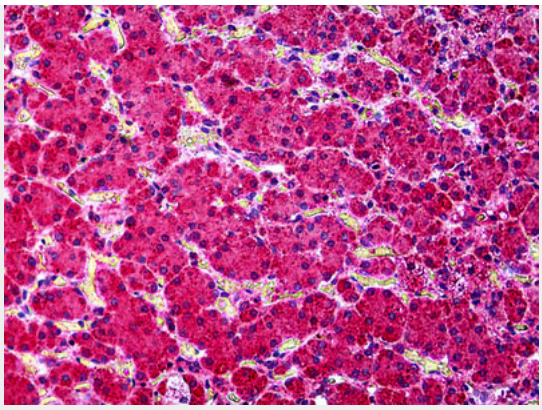
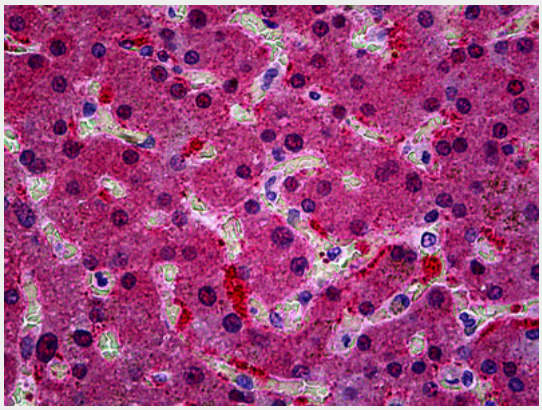


Anti-KCNN4 antibody IHC of human adrenal.



Anti-KCNN4 antibody IHC of human liver.

KCNN4 / KCa3.1 Antibody (aa227-239) - 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 (aa227-239) - 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).