10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Goat anti-KCNN4 / KCa3.1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF4517a

Product Information

Application	WB, IHC, IF, FC, Pep-ELISA
Primary Accession	O15554
Other Accession	NP_002241.1
Reactivity	Human, Mouse, Rat, Dog
Host	Goat
Clonality	Polyclonal
Clone Names	KCNN4
Calculated MW	47696

Additional Information

Gene ID	3783
Other Names	KCNN4; potassium intermediate/small conductance calcium-activated channel, subfamily N, member 4; IK1; IKCA1; KCA4; KCa3.1; SK4; hIKCa1; hKCa4; hSK4; intermediate conductance calcium-activated potassium channel protein 1; putative erythrocyte intermediate
Dilution	WB~~1:1000 IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50 Pep-ELISA~~N/A
Format	Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Goat anti-KCNN4 / KCa3.1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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.