

# KCNN4 (SK4) Polyclonal Antibody

Catalog # AP63695

## Product Information

Application	WB, IHC-P
Primary Accession	<a href="#">O15554</a>
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47696

## Additional Information

Gene ID	3783
Other Names	KCNN4; IK1; IKCA1; KCA4; SK4; Intermediate conductance calcium-activated potassium channel protein 4; SK4; SKCa 4; SKCa4; IKCa1; IK1; KCa3.1; KCa4; Putative Gardos channel
Dilution	WB~~WB 1:1000-2000, IHC 1:50-100 IHC-P~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

## Protein Information

Name	KCNN4 ( <a href="#">HGNC:6293</a> )
Synonyms	IK1, IKCA1, KCA4, SK4
Function	<p>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:<a href="#">10026195</a>, PubMed:<a href="#">10961988</a>, PubMed:<a href="#">11425865</a>, PubMed:<a href="#">15831468</a>, PubMed:<a href="#">17157250</a>, PubMed:<a href="#">18796614</a>, PubMed:<a href="#">26148990</a>, PubMed:<a href="#">9326665</a>, PubMed:<a href="#">9380751</a>, PubMed:<a href="#">9407042</a>). 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:<a href="#">9326665</a>, PubMed:<a href="#">9380751</a>, PubMed:<a href="#">9407042</a>). 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:<a href="#">9326665</a>, PubMed:<a href="#">9380751</a>, PubMed:<a href="#">9407042</a>). Controls calcium influx during vascular contractility by being responsible of membrane</p>

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.

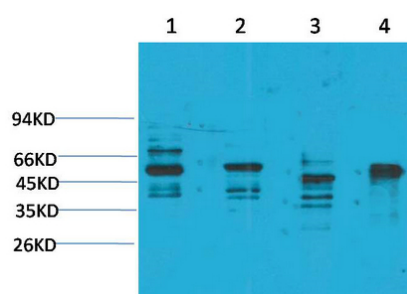
#### Tissue Location

Widely expressed in non-excitable tissues.

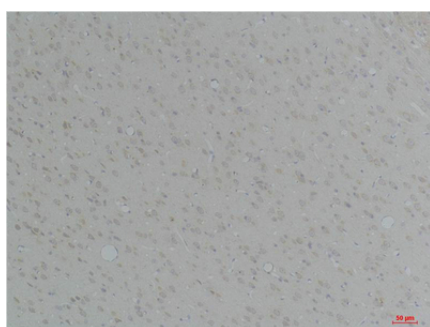
## Background

Forms a voltage-independent potassium channel that is activated by intracellular calcium (PubMed:[26148990](#)). Activation is followed by membrane hyperpolarization which promotes calcium influx. 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 (PubMed:[24591580](#)).

## Images



Western blot analysis of 1) Rat Brain Tissue, 2) Mouse Brain Tissue, 3) K562, 4) HepG2 with KCNN4(SK4) Rabbit pAb diluted at 1:2,000.



Immunohistochemical analysis of paraffin-embedded Rat Brain Tissue using KCNN4(SK4) Rabbit pAb diluted at 1:200.

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