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KCNK18 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13619C

Specification

KCNK18 Antibody (Center) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	Q7Z418
Other Accession	NP_862823.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**43671**
Antigen Region	**168-197**

KCNK18 Antibody (Center) - Additional Information

Gene ID 338567

Other Names
Potassium channel subfamily K member 18, TWIK-related individual potassium channel, TWIK-related spinal cord potassium channel, KCNK18, TRESK, TRIK

Target/Specificity
This KCNK18 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 168-197 amino acids from the Central region of human KCNK18.

Dilution
IHC-P~~1:10~50
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
KCNK18 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

KCNK18 Antibody (Center) - Protein Information

Name KCNK18 {ECO:0000303|PubMed:22355750, ECO:0000312|HGNC:HGNC:19439}

Function K(+) channel that conducts outward and inward rectifying currents at depolarized and hyperpolarized membrane potentials, respectively. The outward rectifying currents are voltage-dependent, coupled to K(+) electrochemical gradient across the membrane, whereas the inward currents can be induced in response to activation of Ca(2+)- mobilizing receptors (PubMed:12754259, PubMed:15562060, PubMed:20871611, PubMed:22355750, PubMed:26919430, PubMed:30573346). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties. In trigeminal ganglia sensory neurons, the heterodimers of KCNK18/TRESK and KCNK2/TREK-1 or KCNK10/TREK-2 inhibit neuronal firing and neurogenic inflammation by stabilizing the resting membrane potential at K(+) equilibrium potential as well as by regulating the threshold of action potentials and the spike frequency (By similarity). In thymocytes, conducts K(+) currents upon T cell receptor (TCR) signaling leading to sustained Ca(2+) influx and NF-kappa-B activation, FOXP3 transcription and positive selection of regulatory T cell (Treg) progenitor subsets (PubMed:34702947). Appears to mediate the analgesics effects of hydroxy-alpha-sanshool, a metabolite naturally present in Schezuan pepper and other Xanthoxylum plants (By similarity).

Cellular Location
Cell membrane; Multi-pass membrane protein

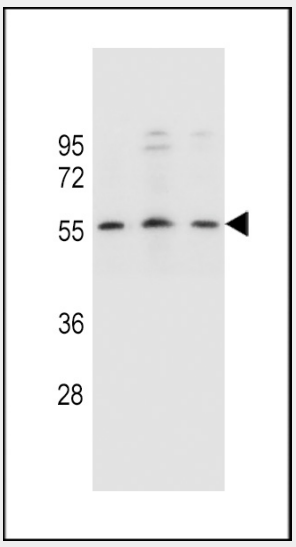
Tissue Location
Expressed in dorsal root ganglion and trigeminal ganglion neurons. Detected at low levels in spinal cord. Expressed in regulatory T cells (at protein level).

KCNK18 Antibody (Center) - 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

KCNK18 Antibody (Center) - Images



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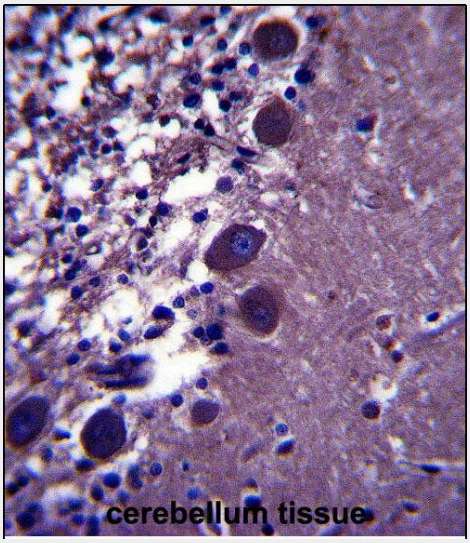
KCNK18 Antibody (Center) (Cat. #AP13619c) western blot analysis in SiHa,U251,MCF-7 cell line lysates (35ug/lane).This demonstrates the KCNK18 antibody detected the KCNK18 protein (arrow).



KCNK18 Antibody (Center) (Cat. #AP13619c)immunohistochemistry analysis in formalin fixed and paraffin embedded human cerebellum tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of KCNK18 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

KCNK18 Antibody (Center) - Background

Two-pore domain potassium channels, such as KCNK18, give rise to background, or leak, potassium conductance, and they regulate diverse cellular functions by adjusting both the resting membrane potential and excitability. KCNK18 is unique among this family of potassium channels in that its activity is regulated by intracellular calcium (summary by Czirjak and Enyedi, 2006 [PubMed 16569637]).

KCNK18 Antibody (Center) - References

Lafreniere, R.G., et al. Nat. Med. 16(10):1157-1160(2010)
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Egenberger, B., et al. Biochem. Biophys. Res. Commun. 391(2):1262-1267(2010)
Pottosin, I.I., et al. Pflugers Arch. 456(6):1037-1048(2008)
Czirjak, G., et al. J. Biol. Chem. 283(23):15672-15680(2008)