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KCNK13 Antibody
Catalog # ASC11354

Specification

KCNK13 Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q9HB14
Other Accession	NP_071337, 16306555
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**KCNK13 antibody can be used for detection of KCNK13 by Western blot at 0.5 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

KCNK13 Antibody - Additional Information

Gene ID **56659**

Target/Specificity
KCNK13; KCNK13 antibody is predicted to not cross-react with other KCNK protein family members.

Reconstitution & Storage
KCNK13 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
KCNK13 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

KCNK13 Antibody - Protein Information

Name KCNK13 {ECO:0000303|PubMed:24163367, ECO:0000312|HGNC:HGNC:6275}

Function
K(+) channel that conducts outward rectifying tonic currents potentiated by purinergic signals (PubMed:24163367, PubMed:25148687, PubMed:30472253, PubMed:38409076). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties (PubMed:25148687). Contributes most of K(+) currents at the plasma membrane of resting microglia. Maintains a depolarized membrane potential required for proper ramified microglia morphology and phagocytosis, selectively mediating microglial pruning of presynaptic

compartments at hippocampal excitatory synapses (PubMed:38409076). Upon local release of ATP caused by neuronal injury or infection, it is potentiated by P2RY12 and P2RX7 receptor signaling and contributes to ATP-triggered K(+) efflux underlying microglial NLRP3 inflammasome assembly and IL1B release (By similarity) (PubMed:38409076).

Cellular Location
Cell membrane; Multi-pass membrane protein

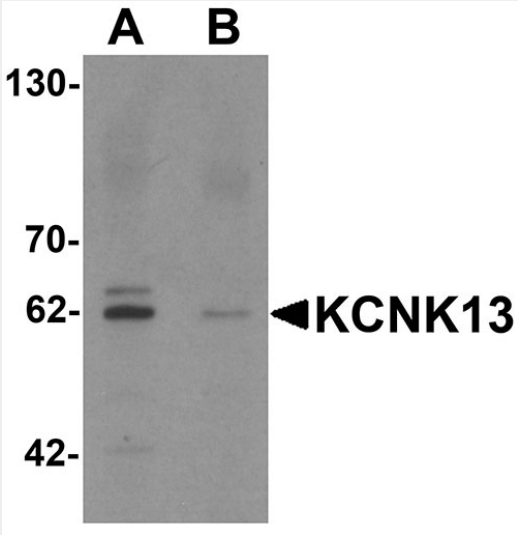
Tissue Location
Expressed in microglia (at protein level).

KCNK13 Antibody - 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

KCNK13 Antibody - Images



Western blot analysis of KCNK13 in rat brain tissue lysate with KCNK13 antibody at 0.5 µg/mL in (A) the absence and (B) the presence of blocking peptide.

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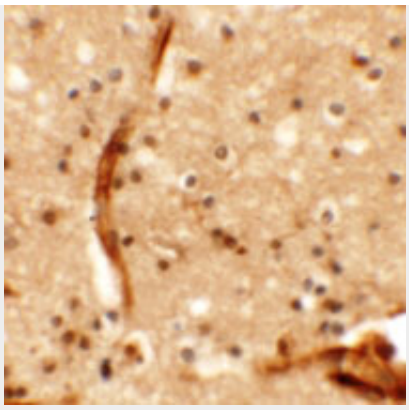
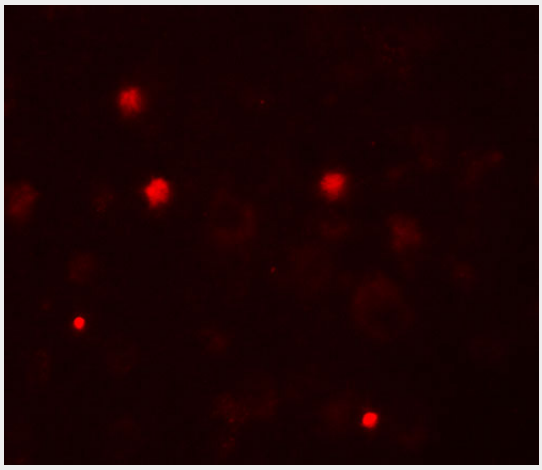


Immunohistochemistry of KCNK13 in human brain tissue with KCNK13 antibody at 5 µg/mL.



Immunofluorescence of KCNK13 in human brain tissue with KCNK13 antibody at 20 µg/mL.

KCNK13 Antibody - Background

KCNK13 Antibody: The closely related proteins KCNK13 and KCNK12 (also known as THIK1 and 2) are the first two members of a novel two pore-forming P domains K+ channels subfamily. The pore loop domain, a highly conserved region common to all potassium channels, is involved in determining potassium ion selectivity. Members of this family are all characterized by four transmembrane domains and may function to help influence the resting membrane potential of cells. KCNK13 is expressed mainly in the brain, but is also observed in kidneys. KCNK13 has been suggested to be a candidate for the Cs+-permeable K+ channel activated by GABA(B) receptors.

KCNK13 Antibody - References

Rajan S, Wischmeyer E, Karschin C, et al. THIK-1 and THIK-2, a novel subfamily of tandem pore domain K+ channels. J. Biol. Chem. 2001; 276:7302-11.
Jezzini SH and Moroz LL. Identification and distribution of a twopore domain potassium channel in the CNS of Aplysia californica. Brain Res. Mol. Brain Res. 2004; 127:27-38.
Theilig F, Goranova I, Hirsch JR, et al. Cellular localization of THIK-1 (K(2P)13.1) and THIK-2 (K(2P)12.1) K channels in the mammalian kidney. Cell Physiol. Biochem. 2008; 21:63-74
Ishii H, Nakajo K, Yanagawa Y, et al. Identification and characterization of Cs(+)-permeable K(+) channel current in mouse cerebellar Purkinje cells in lobules 9 and 10 evoked by molecular layer stimulation. Eur. J. Neurosci. 2010; 32:736-48