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

KCNK12 Antibody

Catalog # ASC11355

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9HB15
Other Accession	NP_071338, 11545761
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	46889
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	KCNK12 antibody can be used for detection of KCNK12 by Western blot at 0.5 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	56660
Other Names	Potassium channel subfamily K member 12, Tandem pore domain halothane-inhibited potassium channel 2, THIK-2, KCNK12
Target/Specificity	KCNK12; KCNK12 antibody is predicted to not cross-react with other KCNK protein family members.
Reconstitution & Storage	KCNK12 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	KCNK12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KCNK12 {ECO:0000303|PubMed:24163367, ECO:0000312|HGNC:HGNC:6274}
Function	K(+) channel subunit that may homo- and heterodimerize to form functional channels with distinct regulatory and gating properties. Can heterodimerize with KCNK13 subunit to conduct K(+) outward rectifying currents at the plasma membrane. The homodimers are mainly retained in the endoplasmic reticulum compartment and may be targeted to the cell surface upon phosphorylation or other activation signals yet to be elucidated.

Cellular Location	Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein

Background

KCNK12 Antibody: 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. KCNK12 is expressed mainly in the brain and lung, but also observed in the kidneys, heart and skeletal muscle. KCNK12 is closely related to KCNK13 (58% identity at the amino acid level), but could not yet been functionally expressed in vitro and may require other proteins to become active.

References

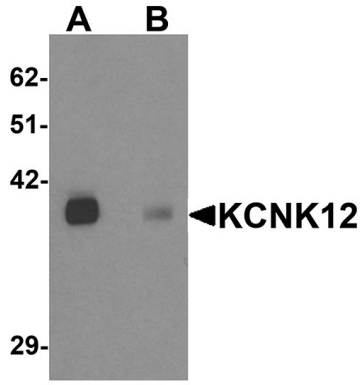
Rajan S, Wischmeyer E, Karschin C, et al. THIK-1 and THIK-2, a novel subfamily of tandem pore domain K+ channels. J. Biol. Chem. 2001; 276:7302-11

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

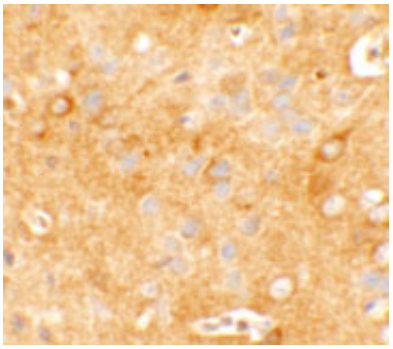
Theilig F, Goranova I, Hirsch JR, et al. Cellular localization of THIK-1 (K(2P)13.1) and THIK-2 (K(2P)12.1) K channels in the mammalian kidney. Cell Physiol. Biochem. 2008; 21:63-74.

Girard C, Duprat F, Terrenoire C, et al. Genomic and functional characteristics of novel human pancreatic 2P domain K+ channels. Biochem. Biophys. Res. Commun. 2001; 282:249-56.

Images

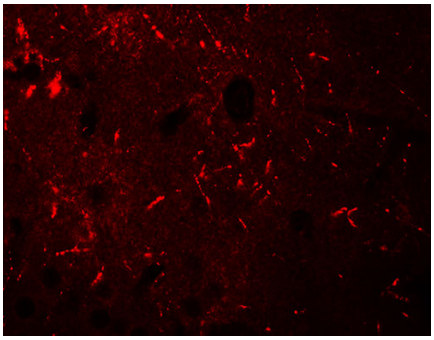


Western blot analysis of KCNK12 in rat brain tissue lysate with KCNK12 antibody at 0.5 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of KCNK12 in mouse brain tissue with KCNK12 antibody at 5 µg/mL.

Immunofluorescence of KCNK12 in mouse brain tissue with KCNK12 antibody at 20 µg/mL.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.