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TRESK Antibody
Catalog # ASC11043

Specification

TRESK Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q7Z418
Other Accession	NP_862823, 32469495
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**TRESK antibody can be used for detection of TRESK by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

TRESK Antibody - Additional Information

Gene ID	**338567**

Target/Specificity
KCNK18;

Reconstitution & Storage
TRESK 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
TRESK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TRESK Antibody - Protein Information

Name KCNK18

Synonyms TRESK, TRIK

Function
Outward rectifying potassium channel. Produces rapidly activating outward rectifier K(+) currents. May function as background potassium channel that sets the resting membrane potential. Channel activity is directly activated by calcium signal. Activated by the G(q)-protein coupled receptor pathway. The calcium signal robustly activates the channel via calcineurin, whereas the anchoring of 14-3- 3/YWHAH interferes with the return of the current to the resting state after activation. Inhibited also by arachidonic acid and other naturally occurring unsaturated free fatty acids. Channel activity is also enhanced by volatile anesthetics, such as isoflurane. Appears to be the primary target of hydroxy-alpha-sanshool, an ingredient of Schezuan pepper. May be involved in the somatosensory function with special respect to pain sensation (By similarity).

Cellular Location
Cell membrane; Multi-pass membrane protein

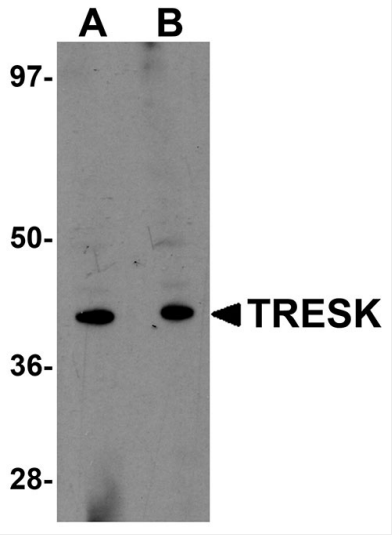
Tissue Location
Expressed specifically in dorsal root ganglion and trigeminal ganglion neurons. Detected at low levels in spinal cord

TRESK Antibody - Protocols

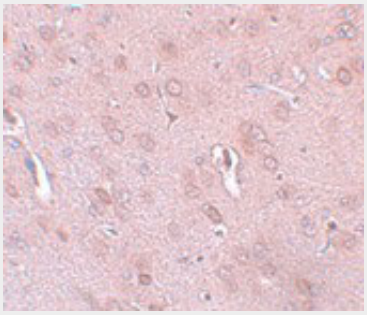
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TRESK Antibody - Images

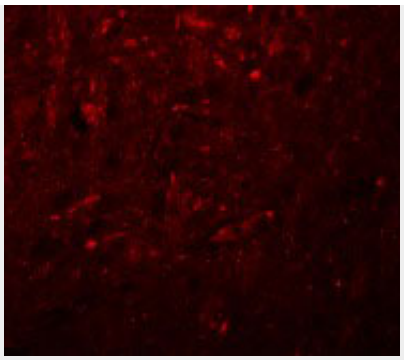


Western blot analysis of TRESK in rat brain tissue lysate with TRESK antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of TRESK in rat brain tissue with TRESK antibody at 5 µg/mL.

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Immunofluorescence of TRESK in Rat Brain cells with TRESK antibody at 20 µg/mL.

TRESK Antibody - Background

TRESK Antibody: TRESK (TWIK-related spinal cord K+ channel) is a two-pore domain K+ channel that induces outward rectification and functions as a background K+ channel that is abundantly expressed in the spinal cord, thymus, spleen, and leukemic T-lymphocytes. TRESK is activated by increased cytoplasmic calcium concentration through calcineurin as well as by acetylcholine and histamine. It has been suggested that TRESK is linked to acute and chronic pain by activation of calcineurin. Other studies indicate that TRESK may play a role in the regulation of T-cell function and could be an excellent target to treat T-cell originated immune dysfunction.

TRESK Antibody - References

Sano Y, Inamura K, Miyake A, et al. A novel two-pore K+ channel, TRESK, is localized in the spinal cord. J. Biol. Chem.2003; 278:27406-12.
Han J and Kang D. TRESK channel as a potential target to treat T-cell mediated immune dysfunction. Biochem. Biophys. Res. Comm.2009; 390:1102-5.
Czirjak G, Toth ZE, and Enyedi P. The two-pore domain K+ channel, TRESK, is activated by the cytoplasmic calcium signal through calcineurin. J. Biol. Chem.2004; 279:18550-8.
Huang DY, Yu BW, and Fan QW. Roles of TRESK, a novel two-pore domain K+ channel, in pain pathway and general anesthesia. Neurosci. Bull.2008; 24:166-72.