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TRAAK Polyclonal Antibody
Catalog # AP72897

Specification

TRAAK Polyclonal Antibody - Product Information

Application	**WB**
Primary Accession	Q9NYG8
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**

TRAAK Polyclonal Antibody - Additional Information

Gene ID 50801

Other Names
KCNK4; TRAAK; Potassium channel subfamily K member 4; TWIK-related arachidonic acid-stimulated potassium channel protein; TRAAK; Two pore potassium channel KT4.1; Two pore K(+) channel KT4.1

Dilution
WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/40000. Not yet tested in other applications.

Format
Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions
-20℃

TRAAK Polyclonal Antibody - Protein Information

Name KCNK4 {ECO:0000303|Ref.2, ECO:0000312|HGNC:HGNC:6279}

Function
K(+) channel that conducts voltage-dependent outward rectifying currents upon membrane depolarization. Voltage sensing is coupled to K(+) electrochemical gradient in an 'ion flux gating' mode where outward but not inward ion flow opens the gate. Converts to voltage-independent 'leak' conductance mode upon stimulation by various stimuli including mechanical membrane stretch, basic pH, heat and lipids (PubMed:22282805, PubMed:25471887, PubMed:25500157, PubMed:26919430, PubMed:30290154, PubMed:38605031). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties (PubMed:26919430). At trigeminal A-beta afferent nerves, the heterodimer of KCNK2/TREK-1 and KCNK4/TRAAK is mostly

coexpressed at nodes of Ranvier where it conducts voltage-independent mechanosensitive and thermosensitive currents, allowing rapid action potential repolarization, high speed and high frequence saltatory conduction on myelinated nerves to ensure prompt sensory responses (By similarity). Permeable to other monovalent cations such as Rb(+) and Cs(+) (PubMed:26919430).

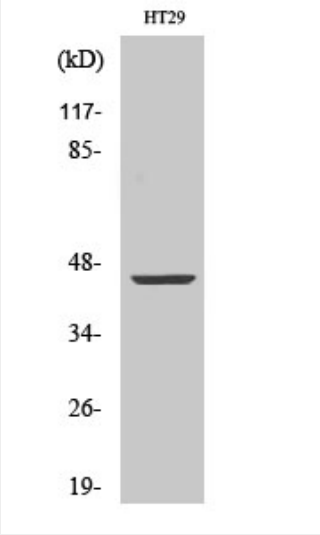
Cellular Location
Cell membrane; Multi-pass membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:G3V8V5}. Note=Localizes at the Ranvier nodes of myelinated afferent nerves {ECO:0000250|UniProtKB:G3V8V5}

TRAAK Polyclonal 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

TRAAK Polyclonal Antibody - Images



Western Blot analysis of various cells using TRAAK Polyclonal Antibody. Secondary antibody was diluted at 1:20000

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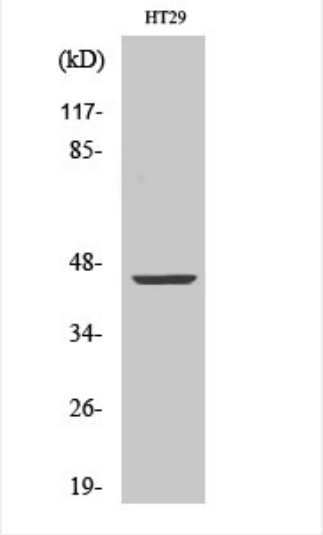

Western Blot analysis of various cells using TRAAK Polyclonal Antibody. Secondary antibody was diluted at 1:20000

TRAAK Polyclonal Antibody - Background

Voltage-insensitive potassium channel (PubMed:22282805). Channel opening is triggered by mechanical forces that deform the membrane (PubMed:22282805, PubMed:25471887, PubMed:25500157). Channel opening is triggered by raising the intracellular pH to basic levels (By similarity). The channel is inactive at 24 degrees Celsius (in vitro); raising the temperature to 37 degrees Celsius increases the frequency of channel opening, with a further increase in channel activity when the temperature is raised to 42 degrees Celsius (By similarity). Plays a role in the perception of pain caused by heat (By similarity). Plays a role in the sensory perception of pain caused by pressure (By similarity).