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KCNC3 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58037

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q14003
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	80578
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Kv33
Epitope Specificity	501-600/757
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane; Multi-pass membrane protein.
SIMILARITY	Belongs to the potassium channel family. C (Shaw) (TC 1.A.1.2) subfamily. Kv3.3/KCNC3 sub-subfamily.
SUBUNIT	Heterotetramer of potassium channel proteins.
DISEASE	Spinocerebellar ataxia 13 (SCA13) [MIM:605259]: Spinocerebellar ataxia is a clinically and genetically heterogeneous group of cerebellar disorders. Patients show progressive incoordination of gait and often poor coordination of hands, speech and eye movements, due to degeneration of the cerebellum with variable involvement of the brainstem and spinal cord. SCA13 is an autosomal dominant cerebellar ataxia (ADCA) characterized by slow progression and variable age at onset, ranging from childhood to late adulthood. Mental retardation can be present in some patients. Note=The disease is caused by mutations affecting the gene represented in this entry.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The Shaker gene family of Drosophila encodes components of voltage-gated potassium channels and is comprised of four subfamilies. Based on sequence similarity, this gene is similar to one of these subfamilies, namely the Shaw subfamily. The protein encoded by this gene belongs to the delayed rectifier class of channel proteins and is an integral membrane protein that mediates the voltage-dependent potassium ion permeability of excitable membranes. [provided by RefSeq].

Additional Information

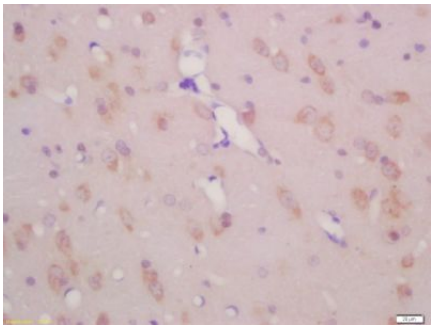
Gene ID	3748
Other Names	Potassium voltage-gated channel subfamily C member 3, KSHIIID, Voltage-gated potassium channel subunit Kv3.3, KCNC3

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

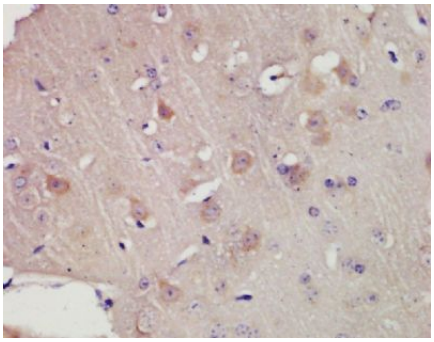
Protein Information

Name	KCNC3
Function	Voltage-gated potassium channel that plays an important role in the rapid repolarization of fast-firing brain neurons. The channel opens in response to the voltage difference across the membrane, forming a potassium-selective channel through which potassium ions pass in accordance with their electrochemical gradient. The channel displays rapid activation and inactivation kinetics (PubMed:10712820, PubMed:16501573, PubMed:19953606, PubMed:21479265, PubMed:22289912, PubMed:23734863, PubMed:25756792, PubMed:26997484). It plays a role in the regulation of the frequency, shape and duration of action potentials in Purkinje cells. Required for normal survival of cerebellar neurons, probably via its role in regulating the duration and frequency of action potentials that in turn regulate the activity of voltage-gated Ca(2+) channels and cellular Ca(2+) homeostasis (By similarity). Required for normal motor function (PubMed:16501573, PubMed:19953606, PubMed:21479265, PubMed:23734863, PubMed:25756792). Plays a role in the reorganization of the cortical actin cytoskeleton and the formation of actin veil structures in neuronal growth cones via its interaction with HAX1 and the Arp2/3 complex (PubMed:26997484).
Cellular Location	Cell membrane; Multi-pass membrane protein. Presynaptic cell membrane {ECO:0000250|UniProtKB:Q63959}; Multi-pass membrane protein. Perikaryon {ECO:0000250|UniProtKB:Q63959}. Cell projection, axon {ECO:0000250|UniProtKB:Q63959}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q63959}. Cell projection, dendritic spine membrane {ECO:0000250|UniProtKB:Q01956}; Multi-pass membrane protein. Cytoplasm, cell cortex. Cytoplasm, cytoskeleton. Note=Detected on Purkinje cell dendritic spines, positioned perisynaptically but also in extrasynaptic positions along the spine membranes (By similarity). Detected at presynaptic calices of Held (By similarity). Colocalizes with the cortical actin cytoskeleton and the Arp2/3 complex (PubMed:26997484) {ECO:0000250|UniProtKB:Q01956, ECO:0000250|UniProtKB:Q63959, ECO:0000269|PubMed:26997484}

Images



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-KCNC3 Polyclonal Antibody, Unconjugated(AP58037) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: mouse brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-KCNC3 Polyclonal Antibody, Unconjugated(AP58037) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining