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

KCNC3 / Kv3.3 (aa317-328) Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF3681a

Specification

KCNC3 / Kv3.3 (aa317-328) Antibody (internal region) - Product Information

Application	**WB, E**
Primary Accession	Q14003
Other Accession	NP_004968.2, 3748, 16504 (mouse), 117101 (rat)
Reactivity	**Mouse, Rat**
Predicted	**Human, Pig**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**80578**

KCNC3 / Kv3.3 (aa317-328) Antibody (internal region) - 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
WB~~1:1000
E~~N/A

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
KCNC3 / Kv3.3 (aa317-328) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

KCNC3 / Kv3.3 (aa317-328) Antibody (internal region) - 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}

KCNC3 / Kv3.3 (aa317-328) Antibody (internal region) - 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

KCNC3 / Kv3.3 (aa317-328) Antibody (internal region) - Images

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AF3681a (0.3 µg/ml) staining of Mouse Brain lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

KCNC3 / Kv3.3 (aa317-328) Antibody (internal region) - References

Mutations in voltage-gated potassium channel KCNC3 cause degenerative and developmental central nervous system phenotypes. Waters MF, Minassian NA, Stevanin G, Figueroa KP, Bannister JP, Nolte D, Mock AF, Evidente VG, Fee DB, Müller U, Dürr A, Brice A, Papazian DM, Pulst SM. Nat Genet. 2006 Apr;38(4):447-51. PMID: 16501573