

TRPC4 Polyclonal Antibody

Catalog NumberPA1-29441

Product data sheet

| Details            |  | Species Reactivity   |                               |
|--------------------|--|--|-------------------------------|
| Size               | 50 µL  | Species reactivity   | Mouse, Rat                    |
| Host/Isotope       | Rabbit / IgG   | Tested Applications  |                               |
| Class              | Polyclonal   | Immunohistochemistry (Frozen) (IHC (F))  | Dilution *<br>Assay-dependent |
| Type               | Antibody   | Western Blot (WB)  | 1:200                         |
| Immunogen          | synthetic peptide (KEKHAHEEDSSIDYDL) corresponding to residues 943-958 of mouse TRPC4 with additional N-terminal cysteine. | * Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls. |                               |
| Conjugate          | Unconjugated   |  |                               |
| Form               | Liquid   |  |                               |
| Concentration      | 0.3 mg/mL  |  |                               |
| Storage Conditions | Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.                               |  |                               |

Product specific information

PA1-29441 is expected to react with human samples due to sequence homology. Predicted molecular weight: 117 kDa.

Background/Target Information

TRPC4 is a member of the canonical subfamily of transient receptor potential cation channels. TRPC4 forms a non-selective calcium-permeable cation channel that is activated by Gq-coupled receptors and tyrosine kinases, and plays a role in multiple processes including endothelial permeability, vasodilation, neurotransmitter release and cell proliferation. Single nucleotide polymorphisms in TRPC4 may be associated with generalized epilepsy with photosensitivity. Alternatively spliced transcript variants encoding multiple isoforms have been observed for TRPC4. The classical or canonical transient receptor potential (TRPC) channels are the subfamily most closely related to the founding member of the TRP family, the Drosophila TRP channel. TRPC channels have seven TRPC genes that encode the channel protein (TRPC1-7). Diseases associated with TRPC4 include Photosensitive Epilepsy. CaV3.3 encodes the pore-forming alpha subunit of a voltage gated calcium channel. The encoded protein is a member of a subfamily of calcium channels referred to as is a low voltage-activated, T-type, calcium channel. The channel encoded by CaV3.3 is characterized by a slower activation and inactivation compared to other T-type calcium channels. CaV3.3 may be involved in calcium signaling in neurons. Alternate splicing results in multiple transcript variants of CaV3.3. Voltage-gated calcium channels (CaV) are present in the membrane of most excitable cells and mediate calcium influx in response to depolarization, an proteins such as CaV3.3 regulate intracellular processes such as contraction, secretion, neurotransmission and gene expression. Diseases associated with CACNA1I include Childhood Absence Epilepsy.

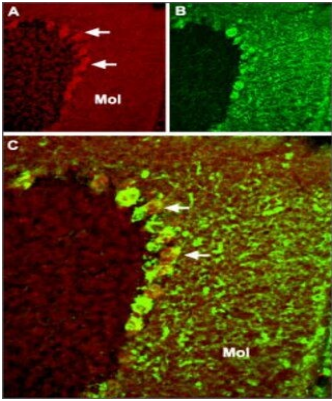
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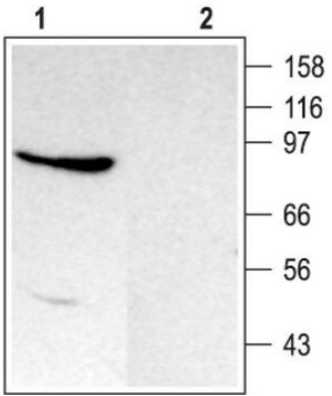
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Product Images For TRPC4 Polyclonal Antibody



TRPC4 Antibody (PA1-29441) in IHC (F)

Immunohistochemistry (Frozen) analysis of TRPC4 in mouse cerebellum frozen tissue section was performed using TRPC4 Polyclonal Antibody (Product # PA1-29441). A. TRPC4 (red) appears in Purkinje cells (arrows) and in the molecular (Mol) layer. B. Staining with Mouse Anti-Parvalbumin (PV) in the same brain section. C. Confocal merge of TRPC4 and PV demonstrates partial co-localization in the Purkinje and the molecular layers.



TRPC4 Antibody (PA1-29441) in WB

Western Blot analysis of TRPC4 was performed by loading rat brain extract. Proteins were transferred to a membrane and probed with a TRPC4 Polyclonal Antibody (Product # PA1-29441). Lane 1 : Antibody dilution 1:200, Lane 2 : Antibody + immunizing peptide

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