



Cav1.2 (Alpha1c subunit of Voltage-Gated Calcium Channel, Cardiac L-Type, Cacna1c)

Catalog number

C2097-85B

Supplier

United States Biological

This gene encodes an alpha-1 subunit of a voltage-dependent calcium channel. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization. The alpha-1 subunit consists of 24 transmembrane segments and forms the pore through which ions pass into the cell. The calcium channel consists of a complex of alpha-1, alpha-2/delta, beta, and gamma subunits in a 1:1:1:1 ratio. There are multiple isoforms of each of these proteins, either encoded by different genes or the result of alternative splicing of transcripts. The protein encoded by this gene binds to and is inhibited by dihydropyridine. Many alternate transcriptional splice variants of this gene have been observed but have not been thoroughly characterized.

Applications

Suitable for use in Western Blot, Immunohistochemistry and Immunoprecipitation. Other applications have not been tested.

Recommended Dilution

Western Blot: 1:200 Rat brain and rat heart membranes
Immunohistochemistry: 1:200 on rat brain sections.
Optimal dilutions to be determined by the researcher.

Positive Control Antigen

C2097-85B1: Cav1.2, Rat, Control Peptide (Alpha1c subunit of Voltage-Gated Calcium Channel, Cardiac L-Type, Cacna1c)

Storage and Stability

Lyophilized and reconstituted products are stable for 12 months after receipt at -20°C. Reconstitute with sterile ddH₂O. Aliquot to avoid repeated freezing and thawing. Store at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

Immunogen

Synthetic peptide (C)TTKI NMDDL QPSEN EDKS (CNC1), corresponding to residues 848-865 of rat Cav1.2. Epitope location: Intracellular loop between II and III domains. Species Sequence Homology: mouse (100%); guinea pig (17/18); human, rabbit (16/18).

Formulation

Supplied as a lyophilized powder in PBS, pH 7.4, 1% BSA, 0.05% sodium azide. Reconstitute with sterile dH₂O.

Purity

Purified by affinity chromatography.



Specificity

Recognizes rat Cav1.2.

Product Type

Pab

Source

rat

Isotype

IgG

Grade

Affinity Purified

Applications

IHC IP WB

Crossreactivity

Rt

Storage

-20°C

Reference

1. Bae, I.H. et al. (1999) Korean J. Biol. Sci. 3, 53. 2. Hu, X.Q. et al. (1998) J. Biol. Chem. 273, 5337. 3. Pereon, Y, et al. (1998) Eur. J. Physiol 436, 309. 4. Hernandez, M.A. et al. (1999) Neuroendocrinol. 70, 31. 5. Lopez, I. et al. (1999) Neuroscience 92, 773. 6. Brundel, B.J.J.M. et al. (1999) Cardiovasc. Res. 42, 443. 7. Jiang, Z. et al. (1999) Eur. J. Neurosci. 11, 3481. 8. Serrano, C.J. et al. (1999) FEBS Lett. 462, 171. 9. Acosta, C.G. and Lopez, H.S. (1999) J. Neurosci. 19, 8337. 10. Kreuzberg, U. et al. (2000) Am J. Physiol. 278, H723. 11. Liu, R. et al. (2000) J. Biol. Chem. 275, 8711. 12. Allard, B. et al (2000) J. Biol. Chem. 275. 25556. 13. Ohi, Y. et al. (2001) J. Physiol. 534(2), 313. 14. Hansen, P.B. et al. (2001) Circ. Res. 89, 630.