

Ca²⁺ channel N-type, α -1B subunit

Cat.No. 152 313; Polyclonal rabbit antibody, 50 μ g specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 μ g specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 μ l H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (see remarks) IP: not tested yet ICC: not tested yet IHC: 1 : 500 (see remarks) IHC-P/FFPE: not tested yet EM: not tested yet
Immunogen	Recombinant protein corresponding to AA 2056 to 2336 from rat Ca ²⁺ channel N-type α -1B (UniProt Id: Q02294)
Reactivity	Reacts with: rat (Q02294), mouse (O55017). Other species not tested yet.
Specificity	Specific for Ca ²⁺ channel α -1B.
matching control	152-3P
Remarks	WB: Antibody 1 (cat. no. 152 303) is recommended for this application. Due to its large size, this antibody requires special gel-electrophoresis and Western blot protocols for visualization by immunoblotting. Excellent results can be obtained with the 4-12% TRIS-glycine gradient gels of anamed or NuPage TRIS-acetate gels from Invitrogen. This protein tends to aggregate after boiling, making it necessary to run SDS-PAGE with non-boiled samples. IHC: This antibody requires mild fixation. recommended protocol

Selected General References

Bipartite syntaxin 1A interactions mediate CaV2.2 calcium channel regulation.
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Presynaptic Cav2.1 and Cav2.2 differentially influence release dynamics at hippocampal excitatory synapses.
Scheuber A, Miles R, Poncer JC
The Journal of neuroscience : the official journal of the Society for Neuroscience (2004) 24(46): 10402-9.

Alternative splicing in the voltage-sensing region of N-Type CaV2.2 channels modulates channel kinetics.
Lin Y, McDonough SI, Lipscombe D
Journal of neurophysiology (2004) 92(5): 2820-30.

Differential phosphorylation of two size forms of the N-type calcium channel alpha 1 subunit which have different COOH termini.
Hell JW, Appleyard SM, Yokoyama CT, Warner C, Catterall WA
The Journal of biological chemistry (1994) 269(10): 7390-6.

Molecular cloning of the alpha-1 subunit of an omega-conotoxin-sensitive calcium channel.
Dubel SJ, Starr TV, Hell J, Ahljanian MK, Enyeart JJ, Catterall WA, Snutch TP
Proceedings of the National Academy of Sciences of the United States of America (1992) 89(11): 5058-62.

Rat brain expresses a heterogeneous family of calcium channels.
Snutch TP, Leonard JP, Gilbert MM, Lester HA, Davidson N
Proceedings of the National Academy of Sciences of the United States of America (1990) 87(9): 3391-5.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Voltage gated calcium channels (VGCCs), also referred to as voltage sensitive calcium channels (VSCCs), are present in most excitable cells. They mediate the influx of Ca²⁺ ions into the cell and trigger the release of neurotransmitters or hormones but are also involved in other calcium dependent processes like metabolism, cell proliferation and cell death. VGCCs are composed of four subunits (α -1, α -2, β and δ) in a 1:1:1:1 ratio. The α -1A isoform occurs in VGCCs of the P/Q-type while isoform α -1B is found in the **N-type**. Both belong to the high voltage activated group (hva).