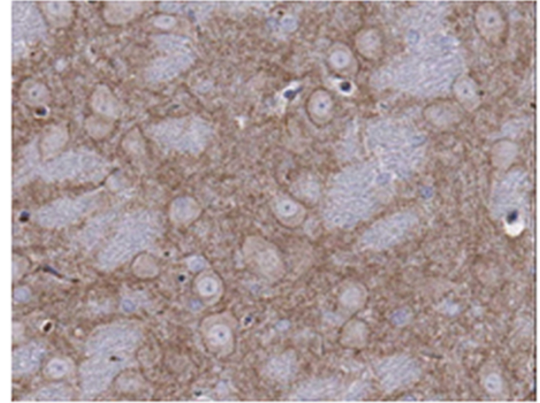


## Monoclonal Antibody to Cav3.1 Ca<sup>2+</sup> channel - Purified

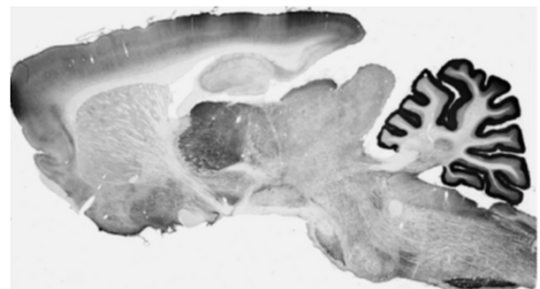
<b>Alternate names:</b>	Voltage-gated calcium channel, alpha-1-G subunit
<b>Catalog No.:</b>	AM50545PU-N
<b>Quantity:</b>	0.1 mg
<b>Concentration:</b>	lot-specific
<b>Background:</b>	Voltage-dependent T-type calcium channel subunit alpha-1G or Voltage-gated calcium channel subunit alpha Cav3.1, like other members of the voltage-sensitive calcium channel (VSCC) family, mediate the entry of calcium ions into excitable cells. These channels regulate and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division and cell death. The isoform alpha-1G gives rise to T-type calcium currents. T-type calcium channels belong to the "low-voltage activated (LVA)" group and are strongly blocked by mibefradil. T-type channels serve pacemaking functions in both central neurons and cardiac nodal cells and also support calcium signaling in secretory cells and vascular smooth muscle.
<b>Uniprot ID:</b>	<a href="#">Q9WUT2</a>
<b>NCBI:</b>	<a href="#">10090</a>
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Recommended Isotype Controls:</b>	SM20P (for use in rat samples), AM03095PU-N
<b>Clone:</b>	N178A/9
<b>Immunogen:</b>	Recombinant protein corresponding to mouse Cav3.1.
<b>Format:</b>	<b>State:</b> Liquid purified Ig fraction <b>Purification:</b> Protein G Chromatography <b>Buffer System:</b> 0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl with 0.05% sodium azide.
<b>Applications:</b>	<b>Immunohistochemistry:</b> 1 µg/mL from a representative lot detected Cav3.1 Ca <sup>2+</sup> channel in rat thalamus tissue. <b>Western Blot:</b> A representative lot detected Cav3.1 Ca <sup>2+</sup> in rat brain membrane tissue lysate. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	Demonstrated to react with Mouse and Rat. Other homologies: Human (80% sequence homology).
<b>Storage:</b>	Store undiluted at 2-8°C. Shelf life: One year from despatch.

**Pictures:**

**Immunohistochemistry Analysis:**  
Representative lot data.  
Formalin Fixed Paraffin Embedded (FFPE) rat thalamus tissue was processed using heat-induced epitope retrieval (HIER). Immunostaining was performed using a 1:2,000 dilution of Cat. No. AM50545PU-N, Anti-Cav3.1 Ca<sup>2+</sup> channel. Reactivity was detected using an Anti-Mouse secondary antibody and HRP-DAB. Positive cytoplasmic/membrane staining was observed in neurons and the extracellular matrix of rat thalamus tissue



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**Western Blot Analysis:**  
Representative lot data.  
Mouse cerebellum tissue lysate was probed with Cat. No. AM50545PU-N, Cav3.1 Ca<sup>2+</sup> channel (1 µg/mL). Proteins were visualized using a Goat Anti-Mouse IgG (H+L) secondary antibody conjugated to HRP and a chemiluminescence detection system.  
Arrow indicates Cav3.1 Ca<sup>2+</sup> channel (~230 kDa). An uncharacterized band at ~53 kDa may be observed in some tissue lysates

