

gamma2 Calcium Channel. Rabbit Polyclonal Antibody, Human, Mouse, Rat

BACKGROUND

Voltage-dependent calcium channels (VDCCs) are large (>400 kDa) heteromers which contain, minimally, three core subunits α_1 , α_2 , α_3 in a 1:1:1 stoichiometry¹. Expression of VDCC gene products in *Xenopus* oocytes, or transfected cells shows that the α_1 subunits contain the ion channel pore while the auxiliary α_2 and α_3 subunits confer optimal cell surface expression and channel kinetics¹. Until recently, the only exception to the above paradigm was the skeletal muscle VDCC, which, in addition to the α_1 , α_2 , α_3 core motif, also has an additional tightly associated integral membrane glycoprotein subunit termed β . Upon co-expression with the α_1 , α_2 , α_3 , β subunits of the skeletal muscle VDCC, subunits alter the peak currents, and the kinetics of channel activation and inactivation with the overall effect being a normalisation of currents to those resembling the endogenous channel². Together, these results suggest that β subunits modulate skeletal muscle VDCCs by stabilising their conformation. The α_2 subunits, or stargazin, the product of a gene mutated in the stargazer mouse, is a homolog of the α_1 channel and is selectively expressed in the brain. It is considered to be a putative neuronal Ca^{2+} channel subtype mainly based on its homology to the α_1 .

ORDERING INFORMATION

CATALOG NUMBER
X1518P

SIZE
100 μ g

FORM
Purified

HOST/CLONE
Rabbit

FORMULATION
Provided as solution in phosphate buffered saline with 0.08% sodium azide

CONCENTRATION
1 mg/ml

ISOTYPE
Polyclonal

APPLICATIONS
Western Blotting

IMMUNOGEN

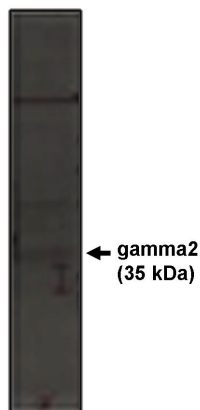
Synthetic peptide derived from the rat calcium channel gamma2 subunit conjugated to KLH

SPECIES REACTIVITY

Human, Mouse, Rat

Legend:

Western blot analysis using gamma2 antibody on rat brain lysate.



For research use only. Not for use in human diagnostics or therapeutics.

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POSITIVE CONTROL

Rat brain lysate

COMMENTS

This antibody can be used for Western blotting at 5-10 µg/ml. Optimal concentration should be evaluated by serial dilutions.

SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

STORAGE CUSTOMER

Product should be stored at -20 degrees C. Aliquot to avoid freeze/thaw cycles

STABILITY

Antibodies are stable for one year from purchase if stored frozen

REFERENCES

1. Hofmann F, et al. *Rev Physiol Biochem Pharmacol* 1999, 139:33-87
2. Singer D, et al. *Science* 1991, 253:1553-7
3. Letts VA, et al. *Nat Genet* 1998, 19:340-7
4. Kang, M.G., et al. *J. Biol. Chem.* 2001, 276: 32917-24
5. Sharp, A.H., et al. *Neuroscience* 2001, 105:599-617
6. Steinlein OK, Noebels JL *Curr Opin Genet Dev* 2000,10:286-91
7. Chen, L., et al. "Stargazin regulates synaptic targeting of AMPA receptors by two distinct mechanisms." *Nature* 2000, 408: 936-943.

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