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Product datasheet for TA328638

KCNMB2 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)RHDEKRNIYQKIRDHDLLD, corresponding to amino acid residues 14-32 of human sloÃ?2.Intracellular, N-terminal part.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	potassium calcium-activated channel subfamily M regulatory beta subunit 2
Database Link:	NP_005823 Entrez Gene 294961 RatEntrez Gene 10242 Human Q9Y691

View online »

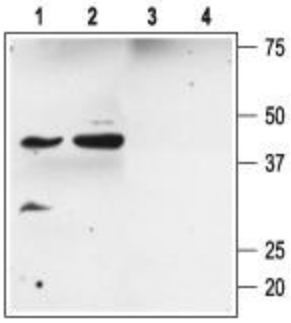
Background: sloÃ?2 is a member the regulatory Ã? subunit family that controls the activity of the large conductance Ca2+-activated K+ channel KCa1.1. This family includes four members with a shared topology: two trans-membrane domains, short intracellular N- and C-termini and a large extracellular region and a distinct tissue distribution. sloÃ?2 expression is relatively broad and includes expression in brain, heart, kidney adrenal chromaffin cells and ovary. The KCa1.1 K+ channel can be activated by either an increase in intracellular Ca2+ concentration or by membrane depolarization. The regulatory Ã? subunits increase the sensitivity of the pore-forming KCa1.1 subunit to Ca2+ and membrane voltage and they may also change the channel pharmacology. The sloβ2 subunit is unique in that it is able to induce a rapid and complete inactivation of the KCa1.1 channel in a manner that closely resembles the ball-and-chain inactivation of the voltage-dependent K+ (Kv) channels. In other words, the inactivation is dependent on a sequence in the N-terminal part of the sloÃ?2 subunit that appears to block the mouth of the ion permeation pathway. The physiological significance of the sloÃ?2 subunit is not clear, but it appears to participate in the inactivation of the KCa1.1 channel in hippocampal CA1 neurons and adrenal chromaffin cells.

Synonyms: MGC22431

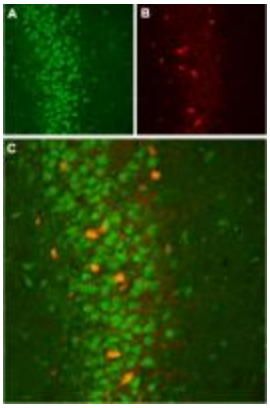
Protein Families: Druggable Genome, Ion Channels: Other, Transmembrane

Protein Pathways: Vascular smooth muscle contraction

Product images:



Western blot analysis of rat kidney (lanes 1 and 3) and rat heart (lanes 2 and 4) membranes: 1, 2. Anti-sloβ2 (KCNMB2) antibody, (1:200). 3, 4. Anti-sloβ2 (KCNMB2) antibody, preincubated with the control peptide antigen.



Expression of sloβ2 in rat hippocampus. Immunohistochemical staining of rat hippocampus using Anti-sloβ2 (KCNMB2). A. sloβ2 appears in the pyramidal layer (green). B. Staining of interneurons with mouse anti parvalbumin (PV, red). C. Confocal merge of sloβ2 and PV demonstrates presence of sloβ2 also in PV (GABA containing) cells (orange).