

## 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)RHDEKRNIYQKIRDHDLDD, corresponding to amino acid residues 14-32 of human sloA2. 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:	<a href="#">NP_005823</a> <a href="#">Entrez Gene 294961 Rat</a> <a href="#">Entrez Gene 10242 Human</a> <a href="#">Q9Y691</a>



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**Background:**

slo $\beta$ 2 is a member the regulatory  $\beta$  subunit family that controls the activity of the large conductance Ca<sup>2+</sup>-activated K<sup>+</sup> 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. slo $\beta$ 2 expression is relatively broad and includes expression in brain, heart, kidney adrenal chromaffin cells and ovary. The KCa1.1 K<sup>+</sup> channel can be activated by either an increase in intracellular Ca<sup>2+</sup> concentration or by membrane depolarization. The regulatory  $\beta$  subunits increase the sensitivity of the pore-forming KCa1.1 subunit to Ca<sup>2+</sup> and membrane voltage and they may also change the channel pharmacology. The slo $\beta$ 2 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<sup>+</sup> (Kv) channels. In other words, the inactivation is dependent on a sequence in the N-terminal part of the slo $\beta$ 2 subunit that appears to block the mouth of the ion permeation pathway. The physiological significance of the slo $\beta$ 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:**

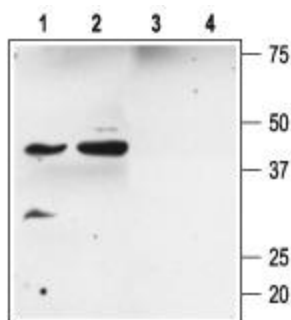
MGC22431

**Protein Families:**

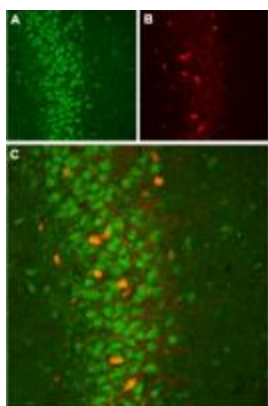
Druggable Genome, Ion Channels: Other, Transmembrane

**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-slo $\beta$ 2 (KCNMB2) antibody, (1:200). 3, 4. Anti-slo $\beta$ 2 (KCNMB2) antibody, preincubated with the control peptide antigen.



Expression of slo $\beta$ 2 in rat hippocampus. Immunohistochemical staining of rat hippocampus using Anti-slo $\beta$ 2 (KCNMB2). A. slo $\beta$ 2 appears in the pyramidal layer (green). B. Staining of interneurons with mouse anti parvalbumin (PV, red). C. Confocal merge of slo $\beta$ 2 and PV demonstrates presence of slo $\beta$ 2 also in PV (GABA containing) cells (orange).