

Product datasheet for **TA328977**

Kcnt1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:200-1:2000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KQEEKQNRRLAG, corresponding to amino acid residues 619-631 of rat Slack . Intracellular, C-terminal.
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, 0.025% NaN ₃ .
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 sodium-activated channel subfamily T member 1
Database Link:	NP_068625 Entrez Gene 227632 Mouse Entrez Gene 60444 Rat Q9Z258



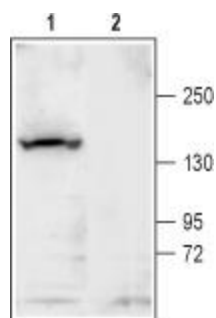
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Background:

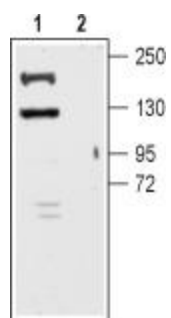
KCa4.1 (Na⁺ activated K⁺ channel, Slack, Slo2.2, KCNT1) is a member of a subgroup within the Ca²⁺ activated K⁺ channel family. The Slack (sequence like a Ca²⁺-activated K⁺ channel) and Slick (sequence like an intermediate conductance K⁺ channel, KCNT2) genes, which encode Na⁺-activated K⁺ (KNa) channels, are expressed at high levels in neurons in several areas of the nervous system. Although KCa4.1 is functionally a Na⁺ activated K⁺ channel, it is termed KCa by the IUPHAR nomenclature, due to its sequence homology to other KCa channels. The family's protein topology consists of six transmembrane domains that flank a single and highly conserved pore region with intracellular N- and C-termini. As is the case for the voltage-dependent K⁺ channels the functional unit for KCa4.1 channels is composed of four subunits that can assemble as either homo or heteromers with KCNT2 (Slick). KCa4.1 and Slick subunits coassemble to form heteromeric channels that differ from the homomers in their unitary conductance, kinetic behavior, subcellular localization, and response to activation of protein kinase C. Heteromer formation requires the N-terminal domain of Slack-B, one of the alternative splice variants of the KCa4.1 channel. This cytoplasmic N-terminal domain of Slack-B also facilitates the localization of heteromeric KNa channels to the plasma membrane. K⁺ channels sensitive to intracellular Na⁺, termed KNa channels, shape neuronal excitability. KNa channels contribute to the adaptation of firing rates and to slow after-hyperpolarizations that follow repetitive firing. In certain neurons, they also appear to be activated by Na⁺ influx accompanying single action potentials. Their molecular properties also suggest that these channels contribute to the response of neurons to hypoxia¹. KCa4.1 channels were shown to be expressed also in dorsal root ganglion (DRG) neurons, where these channels were found to contain a NAD⁺ binding sequence and to be modulated by this endogenous compound³.

Synonyms:

bA100C15.2; FLJ41282; KCa4.1; KIAA1422; SLACK

Product images:

Western blot analysis of rat brain membrane: 1. Anti-KCa4.1 (Slack) antibody, (1:200). 2. Anti-KCa4.1 (Slack) antibody, preincubated with the control peptide antigen.



Western blot analysis of mouse brain membrane:
1. Anti-KCa4.1 (Slack) antibody, (1:200). 2. Anti-KCa4.1 (Slack) antibody, preincubated with the control peptide antigen.