

Product datasheet for **TA328983**

Kcns1 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, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)EFQNEDGEVDDPVLE, corresponding to amino acid residues 209-223 of rat Kv9.3 . 1st extracellular loop.
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% 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 voltage-gated channel, modifier subfamily S, member 1
Database Link:	NP_446406 Entrez Gene 3787 Human Entrez Gene 16538 Mouse Entrez Gene 117023 Rat O88758



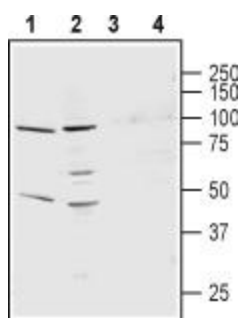
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Background:

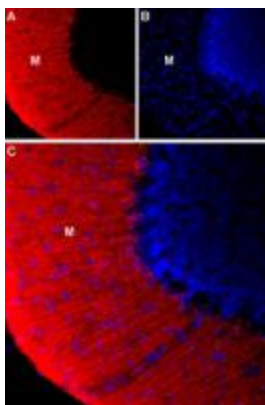
K⁺ channels are transmembrane proteins expressed in many excitable and non-excitable cells. Functional entities are formed by the tetrameric assembly of a subunits which could be done in a homomeric or heteromeric fashion. In addition, the association of β subunits is also required for the proper function of K⁺ channels. Various splice variants are also expressed, thereby complicating the picture. K⁺ channels belonging to the KV9 subfamily resemble to the delayed-rectifier class of K⁺ channel α subunits. These channels include six transmembrane domains, an ion selective pore, a leucine zipper and positively charged amino acids in S4 the voltage sensor domain. Interestingly, both KV9.1 and KV9.3 channels are electrically silent delayed rectifying K⁺ channels. However, they are responsible for modifying the activity of other K⁺ channels such as that of KV2.1, yielding currents different from those of KV2.1 on its own. KV9.1 is mainly expressed in the brain, human lens epithelial cells, kidney, prostate and testis. That of KV9.3 is more generalized and ubiquitous. Interestingly, a polymorphism in the gene encoding for KV9.1 was identified and associated with high risks of suffering from neuropathic pain³. Evidently, additional work needs to be done to evaluate and decipher the role of KV9.1 (if at all) in chronic pain states.

Synonyms:

Kv9.1

Product images:

Western blot analysis of rat lung membranes (lanes 1 and 3) and mouse heart membranes (lanes 2 and 4): 1-2. Anti-Kv9.3 (extracellular) antibody, (1:200). 3-4. Anti-Kv9.3 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of KV9.3 in rat cerebellum. Immunohistochemical staining of immersion-fixed, free floating rat brain frozen sections using Anti-KV9.3 (extracellular) antibody, (1:200). A. KV9.3 staining (red) is expressed in the molecular layer (M). B. DAPI counterstain (blue) displays the layout of cerebellar layers. C. Merge of A and B demonstrates restriction of KV9.3 expression to the molecular layer.