

Product datasheet for **TA328633**

Kv4.3 (KCND3) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)NEALELTGTPEEEHMGK, corresponding to amino acid residues 451-468 of human Kv4.3. Intracellular, C-terminus.
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 voltage-gated channel subfamily D member 3
Database Link:	NP_004971 Entrez Gene 56543 Mouse Entrez Gene 65195 Rat Entrez Gene 3752 Human Q9UK17



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Background:

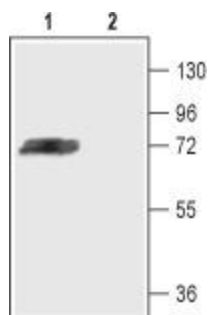
Kv4.3 is a voltage-dependent K⁺ channel that belongs to the Shal channel subfamily and includes two other members: Kv4.1 and Kv4.2. Kv4.3 possesses the signature structure of the voltage-dependent K⁺ channels: six membrane-spanning domains with intracellular N and C termini. As with other members of the voltage-gated K⁺ channel superfamily, the functional channel is a tetramer that can be composed of more than one member of the Shal subfamily, i.e. heterotetramers of Kv4.1 and Kv4.2. The Kv4 channels are characterized by activation at subthreshold membrane potentials, inactivate rapidly and recover from inactivation quickly compared with other voltage-dependent K⁺ channels. This type of current is known as transient A-type K⁺ currents. The biophysical properties of the Kv4.3 subunit can be modified by its association with auxiliary β subunits such as the KChIP family that increase current densities and accelerates both the inactivation and the recovery time. Kv4.3 is highly expressed in the brain where it has a key role in shaping the action potential and firing frequency of neurons. In the heart together with Kv4.2 it underlies the fast inactivating and recovering cardiac transient outward current I_{to}. The channel is also expressed in smooth muscle cells of several organs such as myometrium, lung and colon where its function has not been completely elucidated. Several toxins from spider venoms are potent blockers (affecting the channels in the nanomolar range) of KV4.3 channels. Among these the most potent and selective are Phrixotoxin-1 (28 nM) and Phrixotoxin-2, (71 nM).

Synonyms:

KCND3L; KCND3S; KSHIVB; KV4.3; SCA19; SCA22

Protein Families:

Druggable Genome, Ion Channels: Potassium, Transmembrane

Product images:


Western blot analysis of rat brain membranes: 1. Anti-Kv4.3 antibody, (1:200). 2. Anti-Kv4.3 antibody, preincubated with the control peptide antigen.