

Product datasheet for **TA328972**

Kcnab2 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 SPGMIYSTRYGSPKR(C), corresponding to amino acid residues 20-34 of rat Kv β 2 . 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, 0.025% 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 A regulatory beta subunit 2
Database Link:	NP_059000 Entrez Gene 8514 Human Entrez Gene 16498 Mouse Entrez Gene 29738 Rat P62483



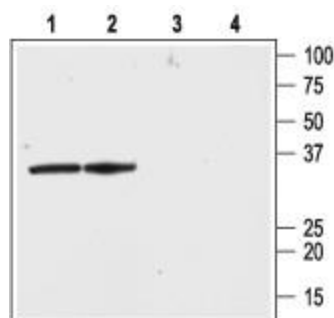
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Background:

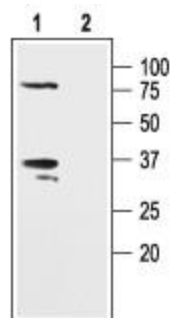
Kv β 2 (or KCNAB2) is a member of a family of proteins that regulate the activity of voltage-dependent K⁺ channels. The other members of the family are Kv β 1 and Kv β 3. The Kv β subunits were originally identified using a biochemical approach that demonstrated that the ion-conducting α subunits existed in a macromolecular complex with auxiliary β subunits with a probable stoichiometry of $\alpha_4\beta_4$. It is now widely established that the regulatory β subunits are able to alter both the biophysical (i.e. acceleration of inactivation kinetics) and biochemical (promote cell surface expression) properties of the functional Kv channel. The Kv β regulatory subunits are cytosolic proteins with conserved C-termini and variable N-terminus domains. The interaction with the α subunits is via the conserved C-terminal end that binds to a specific sequence in the N-terminus domain of the α subunits. Kv β 2, as well as the other Kv β subunits can bind to all the members of the large Kv1.x (Shaker) channel subfamily. However, recent evidence suggests that it can also bind to members of the Kv4.x subfamily. Kv β 2 is the most abundant β subunit in the brain where it couples with all the Kv1.x subunits, but the protein is also expressed in peripheral tissues including heart, lung and cells of hematopoietic origin such as T cells where it couples with Kv1.3, the dominant voltage-dependent K⁺ channel in these cells. We have now developed a highly specific antibody directed against a unique region in the N-terminus end of the rat Kv β 2 protein. The antibody will also recognize Kv β 2 samples from mouse and human origin.

Synonyms:

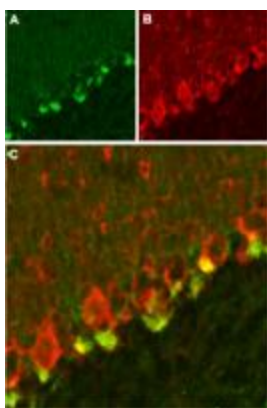
AKR6A5; HKvbeta2; HKvbeta2.1; HKvbeta2.2; KCNA2B; KCNK2; KV-BETA-2; MGC117289; OTTHUMP00000000874; OTTHUMP00000000875; OTTHUMP00000000877

Product images:

Western blot analysis of rat brain lysate (lanes 1 and 3) and membranes (lanes 2 and 4): 1, 2. Anti-Kv β 2 antibody, (1:200). 3, 4. Anti-Kv β 2 antibody, preincubated with the control peptide antigen.



Western blot analysis of human Jurkat T cells: 1. Anti-Kv β 2 antibody, (1:200). 2. Anti-Kv β 2 antibody, preincubated with the control peptide antigen.



Expression of Kv β 2 in mouse cerebellum. Immunohistochemical staining of mouse cerebellum using Anti-Kv β 2 antibody. A. Kv β 2 appears adjacent to Purkinje cells (green). B. Staining of GABAergic cells with mouse anti parvalbumin (PV, red). C. Confocal merge of Kv β 2 and PV demonstrates presence of Kv β 2 adjacent to Purkinje cells.