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Product datasheet for TA328636

KCNE3 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)RSRKVDKRSDPYH, corresponding to amino acid residues 81-93 of human KCNE3 (Accession Q9Y6H6). Intracellular, C-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% 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 voltage-gated channel subfamily E regulatory subunit 3
Database Link:	NP_005463 Entrez Gene 57442 MouseEntrez Gene 63883 RatEntrez Gene 10008 Human Q9Y6H6

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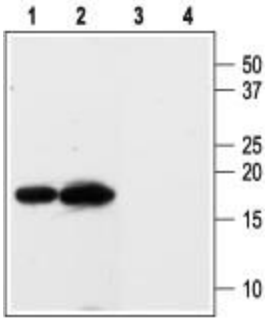
Background: KCNE3 (or MiRP2) is a member of a family of proteins that regulate the activity of voltage-dependent K+ channels. The other members of the family are KCNE1 (IsK, MiNK), KCNE2 (MiRP1), KCNE4 (MiRP3) and KCNE5 (MiRP4). KCNE1 is the founding member of the family and was initially believed to form a K+ channel itself, but was latter recognized that it worked as a regulatory b subunit associated with the Kv7.1 (KCNQ1) a protein. KCNE3 was discovered based on its homology with KCNE1. The KCNE regulatory subunits are small proteins (14- 20 kD) with a type-1 integral membrane topology. It is believed that both the cytoplasmic C-terminus tail and the transmembrane domain are necessary for the interaction with the a subunits. The stoichiometry of the KCNE subunits with their partner a subunits in the native channels is not clear and ratios ranging from 2 to 14 KCNE subunits per 4 a subunits have been proposed. KCNE3 is relatively widely expressed in several tissues with prominent expression in the kidney and skeletal muscle. KCNE3 is quite promiscuous and associations with Kv7.1, Kv3.4, Kv7.4 (KCNQ4), Kv11.1 (HERG), Kv2.1 and Kv3.1b have been demonstrated. The best characterized interactions are with the former two proteins. KCNE3 interacts with Kv7.1 in epithelial cells of the gastrointestinal tract where it appears to be important for Na+ absorption. In skeletal muscle KCNE3 couples to Kv3.4 to regulate muscle function. Indeed, a mutation in KCNE3 (R83H) has been associated with an inherited form of periodic paralysis (Thyrotoxic hypokalemic periodic paralysis).

Synonyms: HOKPP; HYPP; MiRP2

Protein Families: Druggable Genome, Ion Channels: Other, Transmembrane

Product images:



Western blot analysis of rat kidney (lanes 1 and 3) and rat heart (lanes 2 and 4) membranes: 1, 2. Anti-KCNE3 (MiRP2) antibody, (1:200). 3, 4. Anti-KCNE3 (MiRP2) antibody, preincubated with the control peptide antigen.