

Product datasheet for TA328951

HCN4 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:	GST fusion protein with sequence HGHLHDSAEERRLIAEGDASPG EDRTPPGLAAEPPER, corresponding to amino acid residues 119-155 of human HCN4 , (MW: 31 kDa.).?Â ?Â Intracellular, N-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, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	The serum was depleted of anti-GST antibodies by affinity chromatography on immobilized GST, and then anti-HCN4 antibody was affinity purified on immobilized HCN4-GST.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	hyperpolarization activated cyclic nucleotide gated potassium channel 4
Database Link:	NP_005468 Entrez Gene 59266 Rat Entrez Gene 330953 Mouse Entrez Gene 10021 Human Q9Y3Q4



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Background:

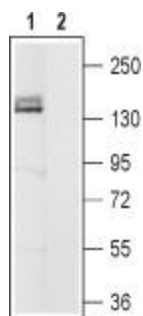
Hyperpolarization-activated cation currents (IHCC) appear in the heart and the brain and have a crucial role in controlling electrical pacemaker activity, contributing to biological processes such as heartbeat, sleep-wake cycle and synaptic plasticity. The IHCC currents are generated by the Hyperpolarization-activated cyclic nucleotide-gated channel family (HCN), which is comprised of four homologous members, HCN1-4. Each HCN subunit consists of six transmembrane domains (TM), a pore region between TM5-TM6 and a binding domain for cyclic nucleotides (CNBD) in the cytoplasmic C-terminus. The HCN subunits can form functional homomers and can also co-assemble into functional heteromers. The channels are closely related to each other and share a homology of about 60%. However, their similarity decreases in the cytoplasmic N- and C-termini. The HCN1-4 channels mainly differ from each other in their speed of activation and the extent to which they are modulated by cAMP. HCN1, weakly affected by cAMP, is the fastest channel, followed by HCN2, HCN3 and HCN4. HCN4 is highly expressed in a restricted manner in adult sinoatrial (SA) node, constituting a good molecular marker for the adult cardiac pacemaker and might serve as a unique marker of the developing SA node. mRNA expression of HCN4 is most abundant in medial habenula and anterior and principal relay nuclei of the thalamus.

Synonyms:

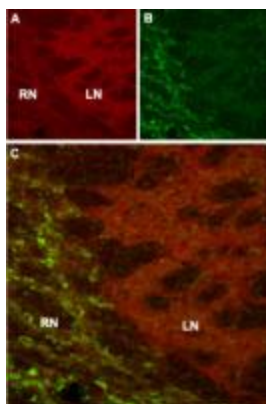
SSS2

Protein Families:

Druggable Genome, Ion Channels: Cyclic nucleotide gated, Transmembrane

Product images:


Western blot analysis of rat brain membranes: 1. Anti-HCN4 antibody, (1:200). 2. Anti-HCN4 antibody, preincubated with the control peptide antigen.



Expression of HCN4 in mouse thalamus. Immunohistochemical staining mouse thalamus using Anti-HCN4 antibody. A. HCN4 (red) appears in the neuropil of the lateral nucleus (LN). B. Staining of reticular nucleus (RN) with mouse anti-Parvalbumin. C. Confocal merge of HCN4 and Parvalbumin images demonstrates separate localization of these proteins in the thalamus.