

Datasheet for ABIN7043284
anti-HCN4 antibody (Intracellular)



[Go to Product page](#)

2 Images

Overview

Quantity:	25 µL
Target:	HCN4
Binding Specificity:	AA 119-155, Intracellular
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This HCN4 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunoprecipitation (IP), Immunochromatography (IC)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to HCN4 Channel
Immunogen:	Immunogen: GST fusion protein Immunogen Sequence: GST fusion protein with the sequence HGHLHDSAEERRLIAEGDASPG EDRTPPGLAAEPPERP, corresponding to amino acid residues 119-155 of human HCN4
Isotype:	IgG
Specificity:	Intracellular, N-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Rabbit - identical, rat - 35,37 amino acid residues identical
Characteristics:	Anti-HCN4 Antibody (ABIN7043284, ABIN7044963 and ABIN7044964) is a highly specific

Product Details

	antibody directed against an epitope of the human protein. The antibody can be used in western blot, immunoprecipitation, immunocytochemistry, and immunohistochemistry applications. It has been designed to recognize HCN4 from human, rat, and mouse samples.
Purification:	The serum was depleted of anti-GST antibodies by affinity chromatography on immobilized GST and then the IgG fraction was purified on immobilized antigen.
Grade:	KO Validated

Target Details

Target:	HCN4
Alternative Name:	HCN4 (HCN4 Products)
Background:	<p>Hyperpolarization-activated cyclic nucleotide-gated potassium channel 4,Hyperpolarization-activated cation currents (Ih) 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.^{1,2}The Ih 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.²The HCN subunits can form functional homomers and can also co-assemble into functional heteromers.²The 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 .^{4,5}mRNA expression of HCN4 is most abundant in medial habenula and anterior and principal relay nuclei of the thalamus.⁶</p> <p>Alternative names: HCN4, Hyperpolarization-activated cyclic nucleotide-gated potassium channel 4</p>
Gene ID:	59266
NCBI Accession:	NM_005477
UniProt:	Q9Y3Q4

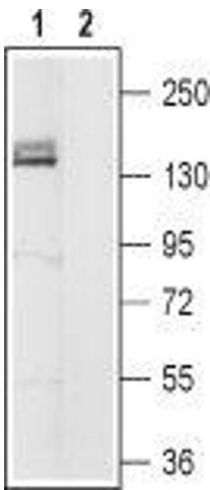
Application Details

Application Notes:	Antigen preadsorption control: 3 µg fusion protein per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: N/A Application Dilutions Western blot wb: 1:200
Comment:	Cited Application: IP IHC ICC Whole Tissue Staining Negative Control: (ABIN7235798) Blocking Peptide: (ABIN7235798)
Restrictions:	For Research Use only

Handling

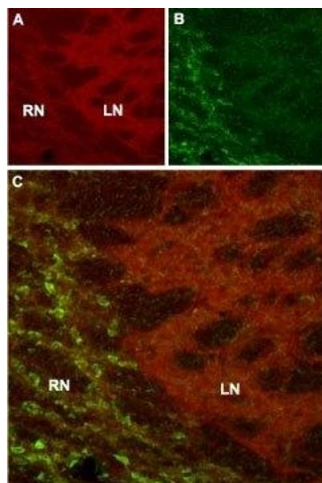
Format:	Lyophilized
Reconstitution:	Reconstitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).

Images



Western Blotting

Image 1. Western blot analysis of rat brain membranes: -
1. Anti-HCN4 Antibody (ABIN7043284, ABIN7044963 and ABIN7044964), (1:200). 2. Anti-HCN4 Antibody, preincubated with HCN4 Blocking Peptide (#BLP-PC052).



Immunohistochemistry

Image 2. Expression of HCN4 in mouse thalamus - Immunohistochemical staining of mouse thalamus using Anti-HCN4 Antibody (ABIN7043284, ABIN7044963 and ABIN7044964). 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.