Data Sheet (Cat.No.TMPY-03183)

TargetMol

SCN2B Protein, Human, Recombinant (hFc)

General Information

Synonyms:	sodium channel, voltage gated, type II beta subunit;sodium channel, voltage gated, type II β subunit;ATFB14
Protein Construction:	A DNA sequence encoding the human SCN2B (O60939) (Met1-Ala159) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Met 30
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O60939
Molecular Weight:	42.2 kDa (predicted); 53-57 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

SCN2B plays a key role in the assembly, expression, and functional modulation of the heterotrimeric complex of the sodium channel. Voltage-gated sodium channels (NaV) are composed of one pore-forming alpha-subunit, which may be associated with either one or more beta-subunits. Alpha-subunits are composed for four homologous domains, each of which contains six transmembrane segments. They are responsible for action potential initiation and propagation in excitable cells, including nerve, muscle, and neuroendocrine cell types.

SCN2B causes an increase in the plasma membrane surface area and in its folding into microvilli. SCN2B also interacts with TNR and may play a crucial role in clustering and regulation of activity of sodium channels at nodes of ranvier.

Reference

Kimura K,et al. (2006) Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. Genome Res. 16(1):55-65.
Tan BH,et al. (2010) Sudden infant death syndrome-associated mutations in the sodium channel beta subunits. Heart Rhythm. 7(6):771-8.
Watanabe H,et al. (2009) Mutations in sodium channel beta1- and beta2-subunits associated with atrial fibrillation. Circ Arrhythm Electrophysiol. 2(3):268-75.
Kimura K et al., 2006, Genome Res. 16(1):55-65.