Recombinant SCN8A protein (His tag)

Catalog Number	539257
Synonyms	Sodium channel protein type VIII subunit alpha; Voltage-gated sodium channel subunit alpha Nav1.6
Species	Human
Expression System	E. coli
Accession	Q9UQD0
Molecular Weight	Predictes a molecular mass of 14.86 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band.

Product Information

Sequence Region	274-387
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 274-387 aa (Q9UQD0) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This recombinant protein product features a stable 114-amino acid fragment (residues 274-387) of the human Sodium Channel Protein Type 8 Subunit Alpha (SCN8A/Nav1.6), a key voltage-gated sodium channel subunit essential for neuronal excitability and action potential regulation. The fragment has been computationally optimized for structural stability and solubility, making it ideal for biochemical and structural studies. The full-length Sodium Channel Protein Type 8 Subunit Alpha (SCN8A) functions as the pore-forming subunit of voltage-gated sodium channel complexes, transitioning between open and closed conformations in response to membrane voltage changes to facilitate selective sodium ion passage. This protein plays a critical role in regulating neuronal excitability by controlling action potential threshold and propagation. It primarily localizes to the cell membrane, with specific enrichment at the axon initial segment. An alternative isoform (Isoform 5) exhibits distinct expression in non-neuronal cells, where it may participate in sodium release from intracellular compartments and regulate podosome formation, macrophage adhesion, and cellular movement.