Recombinant KCNS2 protein (His tag)

Catalog Number	548870
Synonyms	Delayed-rectifier K(+) channel alpha subunit 2; Delayed-rectifier potassium channel subunit Kv9.2; Potassium voltage-gated channel subfamily S member 2
Species	Human
Expression System	E. coli
Accession	Q9ULS6
Molecular Weight	Predictes a molecular mass of 23.36 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	1-184
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-184 aa (Q9ULS6) 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	Recombinant KCNS2 Fragment (1-184): A high-purity, soluble protein fragment derived from the human delayed-rectifier potassium channel regulatory subunit KCNS2. This fragment is optimized for structural and biochemical studies, offering researchers a stable tool to investigate potassium channel modulation mechanisms without functional channel formation. The full-length KCNS2 protein is a regulatory subunit that modulates delayed rectifier voltage-gated potassium channels, specifically influencing the kinetics, expression levels, and inactivation properties of KCNB1 and KCNB2. While it cannot form functional channels independently, it assembles into heterotetrameric complexes with KCNB1/KCNB2, significantly altering channel behavior—including extensive inhibition, kinetic changes, and shifts in voltage-dependent inactivation. KCNS2 localizes to the cell membrane as a multi-pass membrane protein but may remain intracellular in the absence of its partnering subunits. This regulatory role is critical for understanding neuronal excitability and cardiac electrophysiology, with implications for channelopathy research and drug discovery.