Recombinant KCAB2 protein (His tag)

Catalog Number	540252
Synonyms	K(+) channel subunit beta-2; Kv-beta-2; hKvbeta2
Species	Human
Expression System	E. coli
Accession	Q13303
Molecular Weight	Predictes a molecular mass of 38.81 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	36-367
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 36-367 aa (Q13303) 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 Human Voltage-gated potassium channel subunit beta-2 (KCNAB2) fragment (residues 36-367) is a highly stable and soluble protein designed for structural and biochemical studies. This fragment retains key functional characteristics of the full-length protein, making it an ideal tool for investigating potassium channel regulation and NADPH-dependent enzymatic activity. The full-length Voltage-gated potassium channel subunit beta-2 (Kv-beta-2) serves as a regulatory subunit for voltage-gated potassium (Kv) Shaker channels, promoting channel closure and facilitating inactivation of Kv1.4 and Kv1.5 alpha subunit-containing channels. This cytoplasmic protein also exhibits NADPH-dependent aldoketoreductase activity, capable of reducing various aldehyde and ketone substrates. Located primarily in the cytoplasm and associated with the cytoplasmic side of the cell membrane through interactions with pore-forming alpha subunits, Kv-beta-2 contributes to nerve signaling regulation and prevents neuronal hyperexcitability. The protein's dynamic interaction with oxidized and reduced nucleotides may fine-tune cellular excitability, highlighting its importance in neuronal function.