Recombinant CCG2 protein (His tag)

Catalog Number	548614
Synonyms	Neuronal voltage-gated calcium channel gamma-2 subunit; Transmembrane AMPAR regulatory protein gamma-2; TARP gamma-2
Species	Human
Expression System	E. coli
Accession	Q9Y698
Molecular Weight	Predictes a molecular mass of 10.12 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	31-103
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 31-103 aa (Q9Y698) 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	Introducing the recombinant human Voltage-dependent calcium channel gamma-2 subunit (CACNG2) fragment (residues 31-103), a 73-amino acid construct designed for structural and biochemical studies. This soluble fragment enables researchers to explore the regulatory mechanisms of AMPA-selective glutamate receptors and calcium channel inactivation in a stable, experimentally accessible format. The full-length Voltage-dependent calcium channel gamma-2 subunit, encoded by the CACNG2 gene, functions as a key regulator of AMPA-selective glutamate receptors (AMPARs). It promotes AMPAR trafficking to the cell membrane and synapses while modulating receptor gating properties by slowing activation, deactivation, and desensitization rates. The protein regulates all AMPAR subunits non-specifically and is also thought to stabilize calcium channels in an inactivated state. Located in the membrane as a multi-pass transmembrane protein, it is enriched in synapses and synaptosomes, underscoring its critical role in neuronal signaling and synaptic plasticity.