Recombinant CCG7 protein (His tag)

Catalog Number	542479
Synonyms	Neuronal voltage-gated calcium channel gamma-7 subunit; Transmembrane AMPAR regulatory protein gamma-7; TARP gamma-7
Species	Human
Expression System	E. coli
Accession	P62955
Molecular Weight	Predictes a molecular mass of 10.15 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 10 kDa band.

Product Information

Sequence Region	29-102
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 29-102 aa (P62955) 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-7 subunit (CACNG7) fragment (residues 29-102), a highly stable and soluble protein unit ideal for structural and biochemical studies. This product enables researchers to investigate the regulatory roles of CACNG7 in calcium channel activity and AMPA receptor trafficking with precision. The full-length Voltage-dependent calcium channel gamma-7 subunit, encoded by the CACNG7 gene, is a multi-pass membrane protein localized to the cell membrane. It functions as a key regulator of L-type calcium channels containing CACNA1C as the pore-forming subunit, modulating their activity. Additionally, it plays a critical role in the trafficking and gating of AMPA-selective glutamate receptors (AMPARs), specifically targeting GRIA1 and GRIA2 subunits to the cell membrane and synapses. By slowing the activation, deactivation, and desensitization rates of AMPARs and mediating their resensitization, this protein contributes to neuronal signaling and synaptic plasticity, making it a significant target for neuroscience research.