Recombinant ACHB4 protein (His tag)

Catalog Number	539897
Species	Human
Expression System	E. coli
Accession	P30926
Molecular Weight	Predictes a molecular mass of 27.07 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	22-239
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 22-239 aa (P30926) 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 Neuronal Acetylcholine Receptor Subunit Beta-4 (CHRNB4) Fragment (aa 22-239) - a stable, soluble protein fragment ideal for structural studies and biochemical assays investigating nicotinic receptor function and signaling. The Neuronal Acetylcholine Receptor Subunit Beta-4 (CHRNB4) is a key component of pentameric, ligand-gated cation channels in the nervous system with high calcium permeability. These nicotinic acetylcholine receptors (nAChRs) mediate excitatory synaptic transmission and are formed by various subunit combinations that determine channel properties including activation kinetics, pH sensitivity, and cation permeability. CHRNB4 primarily forms heteropentameric receptors with CHRNA2, CHRNA3, and CHRNA4 subunits, with CHRNA3:CHRNB4 complexes being predominant in autonomic ganglia neurons (ganglionic nicotinic receptors). These receptors also function in the habenulo-interpeduncular tract, modulating the mesolimbic dopamine system to influence reward circuits and addiction, while hypothalamic CHRNA3:CHRNB4 activation regulates food intake through POMC neuron signaling. The protein localizes to synaptic and cell membranes as a multi-pass membrane protein, playing crucial roles in neuronal communication and neurophysiological processes.