Recombinant ACHA2 protein (His tag)

Catalog Number	540358
Synonyms	Nicotinic acetylcholine receptor subunit alpha-2
Species	Human
Expression System	E. coli
Accession	Q15822
Molecular Weight	Predictes a molecular mass of 26.35 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	54-264
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 54-264 aa (Q15822) 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	This recombinant protein represents a stable and soluble fragment (residues 54-264) of the Neuronal Acetylcholine Receptor Subunit Alpha-2 (CHRNA2), derived from Homo sapiens. It is designed for structural and biochemical studies, offering researchers a reliable tool to investigate the properties of this key nicotinic receptor subunit involved in neurotransmission and nicotine dependence. The full-length Neuronal Acetylcholine Receptor Subunit Alpha-2 (CHRNA2) is a critical component of pentameric, ligand-gated cation channels known as neuronal acetylcholine receptors (nAChRs). These receptors mediate excitatory synaptic transmission in the nervous system and exhibit high calcium permeability. CHRNA2 contributes to channel properties such as activation, deactivation, and desensitization kinetics, and it forms heteropentameric receptors with subunits like CHRNB2 and CHRNB4, playing a significant role in nicotine dependence. The protein is localized to the synaptic and cell membranes as a multi-pass membrane protein, underscoring its importance in neuronal signaling pathways.