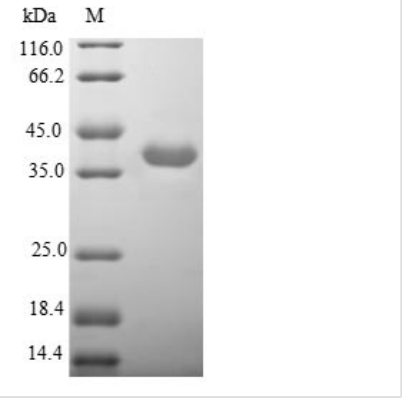
Recombinant Human Neuronal acetylcholine receptor subunit alpha-3 (CHRNA3), partial

Product Code	CSB-EP005389HU1
Relevance	After binding acetylcholine, the AChR responds by an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane.
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P32297
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SEAEHRLFERLFEDYNEIIRPVANVSDPVIIHFEVSMSQLVKVDEVNQIMETNLW LKQIWNDYKLKWNPSDYGGAEFMRVPAQKIWKPDIVLYNNAVGDFQVDDKTK ALLKYTGEVTWIPPAIFKSSCKIDVTYFPFDYQNCTMKFGSWSYDKAKIDLVLIG SSMNLKDYWESGEWAIIKAPGYKHDIKYNCCEEIYPDITYSLYIRRL
Lead Time	3-7 business days
Research Area	Neuroscience
Source	E.coli
Gene Names	CHRNA3
Protein Names	Recommended name: Neuronal acetylcholine receptor subunit alpha-3
Expression Region	32-240aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-SUMO-tagged and C-terminal Myc-tagged
Mol. Weight	44.6kDa
Protein Description	Extracellular Domain
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The recombinant Human CHRNA3 was expressed with the amino acid range of 32-240. The theoretical molecular weight of the CHRNA3 protein is 44.6 kDa. Expression of this CHRNA3 protein is conducted in e.coli. The CHRNA3 gene fragment has been modified by fusing the N-terminal 10xHis-SUMO tag and C-terminal Myc tag, providing convenience in detecting and purifying the recombinant CHRNA3 protein during the following stages.

The human neuronal acetylcholine receptor subunit alpha-3 (CHRNA3) plays a pivotal role in neurotransmission as a component of the nicotinic acetylcholine receptor (nAChR). Activation of nAChRs, including CHRNA3, by acetylcholine or nicotine leads to the influx of ions, particularly sodium and calcium, causing membrane depolarization. This activity is fundamental for synaptic transmission, synaptic plasticity, and various cognitive functions within the central nervous system. Research areas involving CHRNA3 are diverse and include studies related to neurobiology, addiction, and neurodegenerative diseases. Furthermore, genetic variations in CHRNA3 have been associated with nicotine dependence and lung cancer susceptibility, making it a significant target in both neurological and pathological research.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.