Nanodisc Human ACHA7 Protein



HDFP698

Product Information

Product SKU: HDFP698 Expression Host: HEK293 Size: 10μg

Target: ACHA7 **Tag**: C-Flag Tag

Additional Information

Conjugate: Unconjugated **Uniprot ID**: P36544

Molecular Weight: The human full length ACHA7 protein has a MW of 56.4kDa

Protein Information

Background: The nicotinic acetylcholine receptors (nAChRs) are members of a superfamily of

ligand-gated ion channels that mediate fast signal transmission at synapses. The

nAChRs are thought to be hetero-pentamers composed of homologous subunits.

The proposed structure for each subunit is a conserved N-terminal extracellular

domain followed by three conserved transmembrane domains, a variable cytoplasmic

loop, a fourth conserved transmembrane domain, and a short C-terminal extracellular

region. The protein encoded by this gene forms a homo-oligomeric channel, displays

marked permeability to calcium ions and is a major component of brain nicotinic

receptors that are blocked by, and highly sensitive to, alpha-bungarotoxin. Once this

receptor binds acetylcholine, it undergoes an extensive change in conformation that

affects all subunits and leads to opening of an ion-conducting channel across the

plasma membrane. This gene is located in a region identified as a major susceptibility

locus for juvenile myoclonic epilepsy and a chromosomal location involved in the

genetic transmission of schizophrenia. An evolutionarily recent partial duplication

event in this region results in a hybrid containing sequence from this gene and a

novel FAM7A gene. Alternative splicing results in multiple transcript variants.

[provided by RefSeq, Feb 2012]

Synonyms: CHRNA7-2, NACHRA7

Protein Description: Human ACHA7 full length protein-synthetic nanodisc

Formulation: Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH

8.0). Normally 5% – 8% trehalose is added as protectants before lyophilization. Please

see Certificate of Analysis for specific instructions. Do not use solvents with a pH

below 6.5 or those containing high concentrations of divalent metal ions (greater

than 5 mM) in subsequent experiments.

Protein Pathways: -

Protein Families: Ion Channels: Cys-loop Receptors.

Usage: Research use only

Storage & Shipping: Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not

intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing

and thawing). Lyophilized proteins are shipped at ambient temperature.