SUITE 203, 17 Ramsey Road, Shirley, NY 11967, USA
Tel: 1-631-416-1478 Fax: 1-631-207-8356
Email: info@creative-biolabs.com
www.creative-biolabs.com

Product Information

MemDX™ mPro Human CHRNA7/ric3 Cell Line

Cat. No.: **S01YF-1122-KX143**
This product is for research use only and is not intended for diagnostic use.

Product Information

Target Protein
CHRNA7/ric3

Target Protein Species
Human

Target Classification
Ion Channel

Target Family
Acetylcholine Nicotinic Channel

Target Research Area
CNS Research

Related Diseases
Epilepsy

Product Properties

Mycoplasma Testing
Negative

Biosafety Level
Level 1

Activity
Yes

Form
Frozen cells

Selective Antibiotic(s)
Regular antibiotics active against mycoplasmas, bacteria and fungi.

Handling Notes
Frozen cells should be thawed immediately upon receipt and grown according to handling procedure to ensure cell viability and proper assay performance.
Note: Do not freeze the cells upon receipt as it may result in irreversible damage to the cell line.

Disclaimer: We cannot guarantee cell viability if the cells are not thawed immediately upon receipt and grown according to handling procedure.

Incubation

37°C with 5% CO_2

Applications

Drug screening and biological assays

Application Notes

Cells were plated in a 384-well plate and incubated overnight at 37°C and 5% CO_2 to allow the cells to attach and grow. Cells were then stimulated with a control for high-throughput drugs screening andfunctional assays.

Use Restrictions

These cells are distributed for research use only.

Shipping

Dry ice

Storage

Liquid nitrogen

Target

Full Name

Cholinergic receptor nicotinic alpha 7 subunit

Introduction

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.

Alternative Names

NACHRA7; CHRNA7-2; a7 nicotinic acetylcholine receptor; alpha 7 neuronal nicotinic acetylcholine receptor; alpha-7 nicotinic cholinergic receptor subunit; cholinergic receptor, nicotinic alpha 7; cholinergic receptor, nicotinic, alpha 7 (neuronal); cholinergic receptor, nicotinic, alpha polypeptide 7; neuronal acetylcholine receptor protein, alpha-7 chain; CHRNA7; Cholinergic receptor nicotinic alpha 7 subunit

Gene ID

1139

UniProt ID

P36544

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