

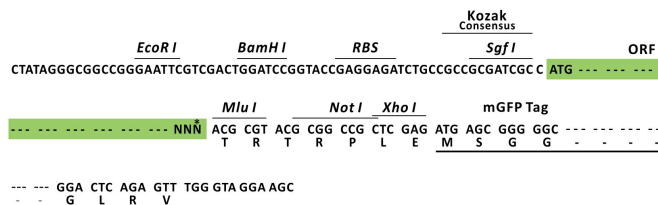
## Product datasheet for RC231298L4

### Nicotinic Acetylcholine Receptor alpha 7 (CHRNA7) (NM\_001190455) Human Tagged Lenti ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | Nicotinic Acetylcholine Receptor alpha 7 (CHRNA7) (NM_001190455) Human Tagged Lenti ORF Clone |
| Tag:                      | mGFP  |
| Symbol:                   | Nicotinic Acetylcholine Receptor alpha 7  |
| Synonyms:                 | CHRNA7-2; NACHRA7   |
| Mammalian Cell Selection: | Puromycin   |
| Vector:                   | pLenti-C-mGFP-P2A-Puro (PS100093)   |
| E. coli Selection:        | Chloramphenicol (34 ug/mL)  |
| ORF Nucleotide Sequence:  | The ORF insert of this clone is exactly the same as(RC231298).                                |
| Restriction Sites:        | Sgfl-MluI   |
| Cloning Scheme:           |   |

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF.

ACCN: NM\_001190455

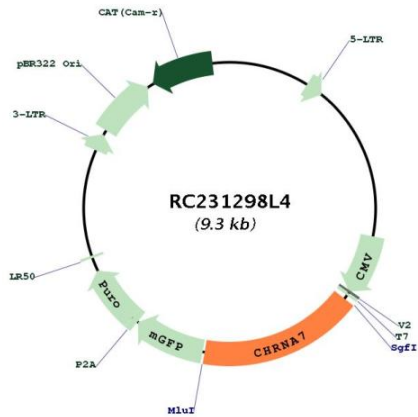


|                               |   |
|-------------------------------|---|
| <b>ORF Size:</b>              | 1593 bp   |
| <b>OTI Disclaimer:</b>        | The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a>  |
| <b>OTI Annotation:</b>        | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.  |
| <b>Components:</b>            | The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).  |
| <b>Reconstitution Method:</b> | <ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li> </ol> |
| <b>RefSeq:</b>                | <a href="#">NM_001190455.1</a>  |
| <b>RefSeq ORF:</b>            | 1596 bp   |
| <b>Locus ID:</b>              | 1139  |
| <b>UniProt ID:</b>            | <a href="#">P36544</a>  |
| <b>Cytogenetics:</b>          | 15q13.3   |
| <b>Protein Families:</b>      | Druggable Genome, Ion Channels: Cys-loop Receptors, Transmembrane   |
| <b>Protein Pathways:</b>      | Calcium signaling pathway   |
| <b>MW:</b>                    | 59.7 kDa  |

**Gene Summary:**

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]

**Product images:**



Circular map for RC231298L4