

## Product datasheet for **TL313917**

### Nicotinic Acetylcholine Receptor alpha 7 (CHRNA7) Human shRNA Plasmid Kit (Locus ID 1139)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Nicotinic Acetylcholine Receptor alpha 7 (CHRNA7) Human shRNA Plasmid Kit (Locus ID 1139)
Locus ID:	1139
Synonyms:	CHRNA7-2; NACHRA7
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	CHRNA7 - Human, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 1139). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	<a href="#">NM_000746</a> , <a href="#">NM_001190455</a> , <a href="#">NR_046324</a> , <a href="#">NM_000746.1</a> , <a href="#">NM_000746.2</a> , <a href="#">NM_000746.3</a> , <a href="#">NM_000746.4</a> , <a href="#">NM_000746.5</a> , <a href="#">NM_001190455.1</a> , <a href="#">NM_001190455.2</a> , <a href="#">BC037571</a> , <a href="#">BC037571.1</a> , <a href="#">BM451308</a> , <a href="#">NM_001190455.3</a> , <a href="#">NM_000746.6</a>
UniProt ID:	<a href="#">P36544</a>



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<b>Summary:</b>	<p>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]</p>
<b>shRNA Design:</b>	<p>These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact <a href="mailto:techsupport@origene.com">techsupport@origene.com</a>. If you need a special design or shRNA sequence, please utilize our <a href="#">custom shRNA service</a>.</p>
<b>Performance Guaranteed:</b>	<p>OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.</p> <p>For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at <a href="mailto:techsupport@origene.com">techsupport@origene.com</a>. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).</p>