

## Product datasheet for **TG313920**

### Nicotinic Acetylcholine Receptor alpha 4 (CHRNA4) Human shRNA Plasmid Kit (Locus ID 1137)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Nicotinic Acetylcholine Receptor alpha 4 (CHRNA4) Human shRNA Plasmid Kit (Locus ID 1137)
Locus ID:	1137
Synonyms:	BFNC; EBN; EBN1; NACHR; NACHRA4; NACRA4
Vector:	pGFP-V-RS (TR30007)
E. coli Selection:	Kanamycin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	CHRNA4 - Human, 4 unique 29mer shRNA constructs in retroviral GFP vector(Gene ID = 1137). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-V-RS Vector, TR30013, included for free.
RefSeq:	<a href="#">NM_000744</a> , <a href="#">NM_001256573</a> , <a href="#">NR_046317</a> , <a href="#">NM_000744.1</a> , <a href="#">NM_000744.2</a> , <a href="#">NM_000744.3</a> , <a href="#">NM_000744.4</a> , <a href="#">NM_000744.5</a> , <a href="#">NM_000744.6</a> , <a href="#">NM_001256573.1</a> , <a href="#">BC096290</a> , <a href="#">BC096291</a> , <a href="#">BC096292</a> , <a href="#">BC096293</a> , <a href="#">BM710937</a> , <a href="#">NM_001256573.2</a>
UniProt ID:	<a href="#">P43681</a>
Summary:	This gene encodes a nicotinic acetylcholine receptor, which belongs to a superfamily of ligand-gated ion channels that play a role in fast signal transmission at synapses. These pentameric receptors can bind acetylcholine, which causes an extensive change in conformation that leads to the opening of an ion-conducting channel across the plasma membrane. This protein is an integral membrane receptor subunit that can interact with either nAChR beta-2 or nAChR beta-4 to form a functional receptor. Mutations in this gene cause nocturnal frontal lobe epilepsy type 1. Polymorphisms in this gene that provide protection against nicotine addiction have been described. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2012]
shRNA Design:	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> .



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**Performance  
Guaranteed:**

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.

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 [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).