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Product datasheet for TR304888

DUOXA1 Human shRNA Plasmid Kit (Locus ID 90527)

Product data:

Product Type:	shRNA Plasmids
Product Name:	DUOXA1 Human shRNA Plasmid Kit (Locus ID 90527)
Locus ID:	90527
Synonyms:	mol; NIP; NUMBIP
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	DUOXA1 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 90527). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	NM_001276264, NM_001276265, NM_001276266, NM_001276267, NM_001276268, NM_144565, NM_144565.1, NM_144565.2, NM_144565.3, NM_001276267.1, NM_001276268.1, NM_001276265.1, NM_001276266.1, NM_001276264.1, BC029819, BC029819.1, BC020841, BM977797, NM_001276267.2, NM_144565.4, NM_001276264.2, NM_001276266.2, NM_001276268.2
UniProt ID:	Q1HG43

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Summary:

Dual oxidases DUOX1 and DUOX2 are NADPH oxidases which are involved in hydrogen peroxide production necessary for thyroid hormonogenesis. They form a heterodimer with specific maturation factors DUOXA1 and DUOXA2, respectively, which is essential for the maturation and function of the DUOX enzyme complexes. This gene encodes the DUOX1 activator or maturation factor DUOXA1. Rat studies identified a bidirectional promoter which controls the transcription of the DUOX1 and DUOXA1 genes. This protein is cotransported to the cell surface when coexpressed with DUOX1 and is retained in the endoplasmic reticulum when expressed without DUOX1 protein. The expression of this gene or the DUOX1 gene is not suppressed by thyroglobulin (Tg), a macromolecular precursor in thyroid hormone synthesis, while the expression of the DUOX2 and DUOXA2 are significantly suppressed by the Tg. This protein is also a p53-regulated neurogenic factor involved in p53 dependent neuronal differentiation. Multiple alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2013]

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 techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.

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. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).