

Product datasheet for **TR308426**

VEGFA Human shRNA Plasmid Kit (Locus ID 7422)

Product data:

Product Type:	shRNA Plasmids
Product Name:	VEGFA Human shRNA Plasmid Kit (Locus ID 7422)
Locus ID:	7422
Synonyms:	MVCD1; VEGF; VPF
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	VEGFA - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 7422). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	NM_001025366 , NM_001025367 , NM_001025368 , NM_001025369 , NM_001025370 , NM_001033756 , NM_001171622 , NM_001171623 , NM_001171624 , NM_001171625 , NM_001171626 , NM_001171627 , NM_001171628 , NM_001171629 , NM_001171630 , NM_001204384 , NM_001204385 , NM_001287044 , NM_003376 , NM_001317010 , NM_001033756.1 , NM_001033756.2 , NM_001025367.1 , NM_001025367.2 , NM_001025370.1 , NM_001025370.2 , NM_001025366.1 , NM_001025366.2 , NM_001025368.1 , NM_001025368.2 , NM_003376.1 , NM_003376.2 , NM_003376.3 , NM_003376.4 , NM_003376.5 , NM_001025369.1 , NM_001025369.2 , NM_001171630.1 , NM_001171628.1 , NM_001171627.1 , NM_001171626.1 , NM_001171629.1 , NM_001171625.1 , NM_001171624.1 , NM_001171623.1 , NM_001171622.1 , NM_001204384.1 , NM_001204385.1 , NM_001287044.1 , BC011177 , BC019867 , BC058855 , BC065522 , BC172307 , BM661679 , NM_001025369.3 , NM_001033756.3 , NM_001204385.2 , NM_001025367.3 , NM_001287044.2 , NM_001171622.2 , NM_003376.6 , NM_001025368.3 , NM_001025370.3 , NM_001025366.3
UniProt ID:	P15692



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Summary:

This gene is a member of the PDGF/VEGF growth factor family. It encodes a heparin-binding protein, which exists as a disulfide-linked homodimer. This growth factor induces proliferation and migration of vascular endothelial cells, and is essential for both physiological and pathological angiogenesis. Disruption of this gene in mice resulted in abnormal embryonic blood vessel formation. This gene is upregulated in many known tumors and its expression is correlated with tumor stage and progression. Elevated levels of this protein are found in patients with POEMS syndrome, also known as Crow-Fukase syndrome. Allelic variants of this gene have been associated with microvascular complications of diabetes 1 (MVCD1) and atherosclerosis. Alternatively spliced transcript variants encoding different isoforms have been described. There is also evidence for alternative translation initiation from upstream non-AUG (CUG) codons resulting in additional isoforms. A recent study showed that a C-terminally extended isoform is produced by use of an alternative in-frame translation termination codon via a stop codon readthrough mechanism, and that this isoform is antiangiogenic. Expression of some isoforms derived from the AUG start codon is regulated by a small upstream open reading frame, which is located within an internal ribosome entry site. The levels of VEGF are increased during infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), thus promoting inflammation by facilitating recruitment of inflammatory cells, and by increasing the level of angiotensin II (Ang II), one of two products of the SARS-CoV-2 binding target, angiotensin-converting enzyme 2 (ACE2). In turn, Ang II facilitates the elevation of VEGF, thus forming a vicious cycle in the release of inflammatory cytokines. [provided by RefSeq, Jun 2020]

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).