ITGAV siRNA – Integrin Alpha-V (Mouse)

PRODUCT OVERVIEW

Product Name	ITGAV, siRNA
Full Product Name	ITGAV siRNA (Mouse)
Product Gene Name	ITGAV sirna
Product Synonym Names	Integrin alpha-V; Vitronectin receptor subunit alpha; CD antigen CD51
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	ITGAV siRNA (Mouse) is a target-specific 19-23 nt siRNA oligo duplexes designed to knock down gene expression.
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Molecular Weight	115,360 Da
3D Structure	ModBase 3D Structure for P43406
Negative Control	siRNA Negative Control (Catalog# MBS8241404) is a non-targeting 21 nt siRNA recommended as a negative control for experiments using targeted siRNA transfection.
Quality Control	Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.
Directions for Use	We recommends transfection with 100 nM siRNA 48 to 72 hours prior to cell lysis. Before resuspending, briefly centrifuge the tube to ensure the lyophilized siRNA is at the bottom of the tube. Resuspend the siRNA oligos to an appropriate concentration with DEPC water. For each vial, suitable for 250 transfections in 24 well plate (20 pmol for each well).
Components	We offer pre-designed sets of 3 different target-specific siRNA oligo duplexes of mouse ITGAV gene. Each vial contains 5 nmol of lyophilized siRNA. The duplexes can be transfected individually or pooled together to achieve knockdown of the target gene, which is most commonly assessed by qPCR or western blot. Our siRNA oligos are also chemically modified (2'-OMe) at no extra charge for increased stability and enhanced knockdown in vitro and in vivo.
Applications Tested/Suitable for ITGAV sirna	RNA Interference (RNAi)
Related Product Information for ITGAV sirna	MBS8200430 is an siRNA targeting ITGAV. Also known as ITGAV siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit ITGAV expression using RNA interference
Other Notes	Small volumes of ITGAV sirna vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ITGAV. It may not necessarily be applicable to this product.

NCBI GI #	154240716

NCBI GeneID	16410
NCBI Accession #	NP_032428.2
UniProt Primary Accession #	P43406
UniProt Secondary Accession #	A2AKI6
UniProt Related Accession #	P43406
GenBank Nucleotide #	NM_008402.3
NCBI Official Full Name	integrin alpha-V
NCBI Official Synonym Full Names	integrin alpha V
NCBI Official Symbol	Itgav
NCBI Official Synonym Symbols	CD51; 1110004F14Rik; 2610028E01Rik; D430040G12Rik
UniProt Protein Name	Integrin alpha-V
UniProt Synonym Protein Names	Vitronectin receptor subunit alpha; CD_antigen: CD51
Protein Family	Integrin
UniProt Gene Name	Itgav
UniProt Entry Name	ITAV_MOUSE
NCBI Protein Information	integrin alpha-V
NCBI Summary for ITGAV	This gene encodes a protein that is a member of the integrin superfamily. Integrins are transmembrane receptors involved cell adhesion and signaling, and they are subdivided based on the heterodimer formation of alpha and beta chains. This protein has been shown to heterodimerize with beta 1, beta 3, beta 6 and beta 8. The heterodimer of alpha v and beta 3 forms the Vitronectin receptor. This protein interacts with several extracellular matrix proteins to mediate cell adhesion and may play a role in cell migration. In mouse, deficiency of this gene is associated with defects in vascular morphogenesis in the brain and early post-natal death. [provided by RefSeq, May 2013]
UniProt Comments for ITGAV	ITGAV: The alpha-V integrins are receptors for vitronectin, cytotactin, fibronectin, fibrinogen, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin and vWF. They recognize the sequence R-G-D in a wide array of ligands. In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions. Belongs to the integrin alpha chain family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Cell adhesion; Membrane protein, integral; Motility/polarity/chemotaxis Cellular Component: filopodium membrane; focal adhesion; cell surface; membrane; microvillus membrane; plasma membrane; integral to membrane; intracellular; nucleus; cytosol; integrin complex; external side of plasma membrane Molecular Function: voltage-gated calcium channel activity; opsonin binding; insulin-like growth factor I binding; protease binding; protein kinase C binding; extracellular matrix binding; protein heterodimerization activity; fibronectin binding; metal ion binding; peptide binding; receptor binding Biological Process: negative regulation of lipid transport; focal adhesion formation; entry of virus into host cell; positive regulation of cell adhesion; T cell activation; cell-matrix adhesion; multicellular organismal development; negative chemotaxis; gonad morphogenesis; regulation of phagocytosis; elevation of cytosolic calcium ion concentration; positive regulation of MAPKKK cascade; positive regulation of cell proliferation; angiogenesis; cell growth; inflammatory response; cell adhesion; cell differentiation; integrin-mediated signaling pathway; blood vessel development; regulation of bone resorption; cell migration; negative regulation of lipoprotein metabolic process; detection of molecule of bacterial origin; cell-substrate adhesion; cellular calcium ion homeostasis; heterotypic cell-cell adhesion; fertilization; negative regulation of low-density lipoprotein receptor biosynthetic process; release of sequestered calcium ion into cytosol; positive regulation of osteoblast proliferation; endothelial cell migration; apoptotic cell clearance; positive regulation of cell migration
Research Articles on ITGAV	**1.** Our study demonstrates that the sOPN/integrin alphav axis, which induces T cell chemotaxis toward macrophages, is critical for suppressing hyperinflammation during the first 3 h of endotoxemia.

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