HIF1AN siRNA – Hypoxia-Inducible Factor 1-Alpha Inhibitor (Mouse)

PRODUCT OVERVIEW

Product Name	HIF1AN, siRNA
Full Product Name	HIF1AN siRNA (Mouse)
Product Gene Name	HIF1AN sirna
Product Synonym Names	Hypoxia-inducible factor 1-alpha inhibitor; Hypoxia-inducible factor asparagine hydroxylase
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	HIF1AN 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	30,424 Da
3D Structure	ModBase 3D Structure for Q8BLR9
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 HIF1AN 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 HIF1AN sirna	RNA Interference (RNAi)
Related Product Information for HIF1AN sirna	MBS8237801 is an siRNA targeting HIF1AN. Also known as HIF1AN siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit HIF1AN expression using RNA interference
Other Notes	Small volumes of HIF1AN 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 HIF1AN. It may not necessarily be applicable to this product.

NCBI GI #	70909332

NCBI GeneID	319594
NCBI Accession #	NP_795932.2
UniProt Primary Accession #	Q8BLR9
UniProt Secondary Accession #	Q3U3G4; A1L3B7
UniProt Related Accession #	Q8BLR9
GenBank Nucleotide #	NM_176958.3
NCBI Official Full Name	hypoxia-inducible factor 1-alpha inhibitor
NCBI Official Synonym Full Names	hypoxia-inducible factor 1, alpha subunit inhibitor
NCBI Official Symbol	Hif1an
NCBI Official Synonym Symbols	FIH; FIH1; 2310046M24Rik; A830014H24Rik
UniProt Protein Name	Hypoxia-inducible factor 1-alpha inhibitor
UniProt Synonym Protein Names	Hypoxia-inducible factor asparagine hydroxylase
Protein Family	Hypoxia-inducible factor 1-alpha inhibitor
UniProt Gene Name	Hif1an
UniProt Entry Name	HIF1N_MOUSE
NCBI Protein Information	hypoxia-inducible factor 1-alpha inhibitor
UniProt Comments for HIF1AN	HIF1AN: Hydroxylates HIF-1 alpha at 'Asp-803' in the C-terminal transactivation domain (CAD). Functions as an oxygen sensor and, under normoxic conditions, the hydroxylation prevents interaction of HIF-1 with transcriptional coactivators including Cbp/p300- interacting transactivator. Involved in transcriptional repression through interaction with HIF1A, VHL and histone deacetylases. Hydroxylates specific Asn residues within ankyrin repeat domains (ARD) of NFKB1, NFKBIA, NOTCH1, ASB4, PPP1R12A and several other ARD-containing proteins. Also hydroxylates Asp and His residues within ARDs of ANK1 and TNKS2, respectively. Negatively regulates NOTCH1 activity, accelerating myogenic differentiation. Positively regulates ASB4 activity, promoting vascular differentiation. Homodimer; homodimerization is essential for catalytic activity. Interacts with VHL and HIF1A. Part of a complex with VHL, HIF1A and HDAC1 or HDAC2 or HDAC3. Interacts with NFKB1 and NFKBIA. Interacts with NOTCH1, NOTCH2 and NOTCH3 but not with NOTCH4. Interacts with APBA3; binding inhibits HIF1AN binding to HIF1A. Interacts with TNKS2. Interacts with PPP1R12A. Interacts with ASB4. Protein type: Oxidoreductase; EC 1.14.11.30; EC 1.14.11.n4 Cellular Component: nucleoplasm; perinuclear region of cytoplasm; cytoplasm; nucleus Molecular Function: NF-kappaB binding; protein homodimerization activity; zinc ion binding; dioxygenase activity; carboxylic acid binding; metal ion binding; iron ion binding; oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors; oxidoreductase activity; cofactor binding; Notch binding Biological Process: peptidyl-aspartic acid hydroxylation; regulation of transcription, DNA-dependent; transcription, DNA-dependent; negative regulation of Notch signaling pathway; peptidyl-asparagine hydroxylation; positive regulation of myoblast differentiation
Research Articles on HIF1AN	**1.** FIH-1 has a role in disrupting the LRRK1/EGFR complex to positively regulate keratinocyte migration
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