AP1S2 siRNA – Ap-1 Complex Subunit Sigma-2 Isoform 2 (Human)

PRODUCT OVERVIEW

Product Name	AP1S2, siRNA
Full Product Name	AP1S2 siRNA (Human)
Product Gene Name	AP1S2 sirna
Product Synonym Names	AP-1 complex subunit sigma-2; Adapter-related protein complex 1 subunit sigma-1B; Adaptor protein complex AP-1 subunit sigma-1B; Clathrin assembly protein complex 1 sigma-1B small chain; Golgi adaptor HA1/AP1 adaptin sigma-1B subunit; Sigma 1B subunit of AP-1 clathrin; Sigma-adaptin 1B; Sigma1B-adaptin
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	AP1S2 siRNA (Human) 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	23,225 Da
OMIM	300629
3D Structure	ModBase 3D Structure for P56377
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 human AP1S2 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 AP1S2 sirna	RNA Interference (RNAi)
Related Product Information for AP1S2 sirna	MBS8224185 is an siRNA targeting AP1S2. Also known as AP1S2 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit AP1S2 expression using RNA interference
Other Notes	Small volumes of AP1S2 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 AP1S2. It may not necessarily be applicable to this product.

NCBI GI #	22027655
NCBI GeneID	8905
NCBI Accession #	NP_003907.3
UniProt Primary Accession #	P56377
UniProt Secondary Accession #	O95326; Q9H2N6; B4DSU4
UniProt Related Accession #	P56377
GenBank Nucleotide #	NM_003916.4
NCBI Official Full Name	AP-1 complex subunit sigma-2 isoform 2
NCBI Official Synonym Full Names	adaptor-related protein complex 1, sigma 2 subunit
NCBI Official Symbol	AP1S2
NCBI Official Synonym Symbols	PGS; DC22; MRX59; MRXS5; MRXSF; MRXS21; SIGMA1B
UniProt Protein Name	AP-1 complex subunit sigma-2
UniProt Synonym Protein Names	Adaptor protein complex AP-1 subunit sigma-1B; Adaptor-related protein complex 1 subunit sigma-1B; Clathrin assembly protein complex 1 sigma-1B small chain; Golgi adaptor HA1/AP1 adaptin sigma-1B subunit; Sigma 1B subunit of AP-1 clathrin; Sigma-adaptin 1B; Sigma1B-adaptin
UniProt Gene Name	AP1S2
UniProt Entry Name	AP1S2_HUMAN
NCBI Protein Information	AP-1 complex subunit sigma-2
NCBI Summary for AP1S2	Adaptor protein complex 1 is found at the cytoplasmic face of coated vesicles located at the Golgi complex, where it mediates both the recruitment of clathrin to the membrane and the recognition of sorting signals within the cytosolic tails of transmembrane receptors. This complex is a heterotetramer composed of two large, one medium, and one small adaptin subunit. The protein encoded by this gene serves as the small subunit of this complex and is a member of the adaptin protein family. Transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2013]
UniProt Comments for AP1S2	AP1S2: Subunit of clathrin-associated adaptor protein complex 1 that plays a role in protein sorting in the late-Golgi/trans-Golgi network (TGN) and/or endosomes. The AP complexes mediate both the recruitment of clathrin to membranes and the recognition of sorting signals within the cytosolic tails of transmembrane cargo molecules. Defects in AP1S2 are the cause of mental retardation X- linked type 59 (MRX59). It is characterized by significantly sub-average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. In contrast to syndromic or specific X-linked mental retardation which also present with associated physical, neurological and/or psychiatric manifestations, intellectual deficiency is the only primary symptom of non-syndromic X-linked mental retardation. MRX59 consists of a mild-to-profound mental retardation. Other features includes hypotonia early in life and delay in walking. Belongs to the adaptor complexes small subunit family. Chromosomal Location of Human Ortholog: Xp22.2 Cellular Component: Golgi membrane; cytoplasmic vesicle membrane; lysosomal membrane; AP-type membrane coat adaptor complex; trans-Golgi network membrane; coated pit; cytosol Molecular Function: protein transporter activity Biological Process: intracellular protein transport; viral reproduction; antigen processing and presentation of exogenous peptide antigen via MHC class II; post-Golgi vesicle-mediated transport; regulation of defense response to virus by virus Disease: Mental Retardation, X-linked, Syndromic 5
Research Articles on AP1S2	**1.** sigma1B adaptin regulates adipogenesis by mediating the sorting of sortilin in adipose tissue.

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