HSD3B1 siRNA – 3 Beta-Hydroxysteroid Dehydrogenase/Delta 5--?4-Isomerase Type 1 (Human)

PRODUCT OVERVIEW

Product Name	HSD3B1, siRNA
Full Product Name	HSD3B1 siRNA (Human)
Product Gene Name	HSD3B1 sirna
Product Synonym Names	3BH; HSDB3A; 3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase type 1; 3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase type I; 3-beta-HSD I; Trophoblast antigen FDO161G
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	HSD3B1 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	42,252 Da
OMIM	109715
3D Structure	ModBase 3D Structure for P14060
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 HSD3B1 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 HSD3B1 sirna	RNA Interference (RNAi)
Related Product Information for HSD3B1 sirna	MBS8210241 is an siRNA targeting HSD3B1. Also known as HSD3B1 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit HSD3B1 expression using RNA interference
Other Notes	Small volumes of HSD3B1 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 HSD3B1. It may not necessarily be applicable to this product.

NCBI GI #	4504507
NCBI GeneID	3283
NCBI Accession #	NP_000853.1
UniProt Primary Accession #	P14060
UniProt Secondary Accession #	Q14545; Q8IV65; A8K691
UniProt Related Accession #	P14060
GenBank Nucleotide #	NM_000862.2
NCBI Official Full Name	3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase type 1
NCBI Official Synonym Full Names	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1
NCBI Official Symbol	HSD3B1
NCBI Official Synonym Symbols	I; HSD3B; HSDB3; HSDB3A; SDR11E1; 3BETAHSD
UniProt Protein Name	3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase type 1
UniProt Synonym Protein Names	3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase type I; 3-beta-HSD I; Trophoblast antigen FDO161GIncluding the following 2 domains:3-beta-hydroxy-Delta(5)-steroid dehydrogenase (EC:1.1.1.145)Alternative name(s):3-beta-hydroxy-5-ene steroid dehydrogenase; Progesterone reductase
Protein Family	3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase
UniProt Gene Name	HSD3B1
UniProt Synonym Gene Names	3BH; HSDB3A; 3-beta-HSD I
UniProt Entry Name	3BHS1_HUMAN
NCBI Protein Information	3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase type 1
UniProt Comments for HSD3B1	HSD3B1: 3-beta-HSD is a bifunctional enzyme, that catalyzes the oxidative conversion of Delta(5)-ene-3-beta-hydroxy steroid, and the oxidative conversion of ketosteroids. The 3-beta-HSD enzymatic system plays a crucial role in the biosynthesis of all classes of hormonal steroids. Efficiently catalyzes the transformation of pregnenolone to progesterone, 17-alpha-hydroxypregnenolone to 17- alpha-hydroxyprogesterone, DHEA to 4-androstenedione, dihydrotestosterone to 5-alpha-androstane-3 beta,17 beta-diol, dehydroepiandrosterone to androstenedione and 5-alpha-androstan-3 beta,17 beta-diol to 5-alpha-dihydrotestosterone. Belongs to the 3-beta-HSD family. Protein type: Membrane protein, integral; EC 1.1.1.145; Lipid Metabolism - androgen and estrogen; Oxidoreductase; Mitochondrial; Lipid Metabolism - C21-steroid hormone; Isomerase; EC 5.3.3.1 Chromosomal Location of Human Ortholog: 1p13.1 Cellular Component: endoplasmic reticulum membrane; mitochondrial inner membrane; integral to membrane; mitochondrial intermembrane space; smooth endoplasmic reticulum membrane Molecular Function: steroid delta-isomerase activity; 3-beta-hydroxy-delta5-steroid dehydrogenase activity Biological Process: steroid metabolic process; mineralocorticoid biosynthetic process; androgen biosynthetic process; glucocorticoid biosynthetic process; estrogen biosynthetic process; steroid biosynthetic process
Research Articles on HSD3B1	**1.** prostate cancer patients who harbored the heterozygous variant HSD3B1 (1245C) are more likely to develop to castration-resistant prostate cancer but do not have shorter time to biochemical recurrence, shorter survival time or higher mortality risk

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