

Product datasheet for MR205766

Hsd3b1 (NM_008293) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hsd3b1 (NM_008293) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hsd3b1
Synonyms:	3-beta-HSD I; D3Erttd383e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR205766 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCTGGATGGAGCTGCCTGGTGACAGGAGCAGGAGGGTTTGTGGCCAGAGGATCATCAAGATGTTGG
TGCAGGAGAAAGAACTGCAGGAGGTGACAGCTCTGGACAAAGTATTCGACCAGAAACCAAGGAGGAATT
CTCCAAGCTGCAGACAAAGACCAAGGTGACAGTGTGGAAGGAGACATTCTGGATGCCAGTGCCTGAGG
AGAGCCTGCCAGGGCATCTCTGTTGTCATCCACTGCTGCTGTCATTGATGTCACAGGTGTCATCCCA
GGCAGACCATCCTAGATGTCAATCTGAAAGGTACCCAGAACCTATTGGAGGCCTGTGTTCAAGCAAGTGT
GCCAGCCTTCATCTTCTGCAGCTCAGTTGATGCTGCAGGGCCCAACTCGTACAAGAAGATCGTCCTGAAT
GGCCACGAGGAACAGAATCATGAAAGCAGATGGTCTGATCCATACCCATACAGCAAAAAGATGGCTGAGA
AGGCAGTACTGGCAGCCAATGGGAGCATGCTGAAAAATGGTGGCACTTTGAATACTTGTGCCTTAAGACC
CATGTACATTTATGGGGAGAGAAGTCCATTCATTTTTAATGCAATAATTAGGGCCCTCAAAAATAAGGGT
ATTCTGTGTGTTACTGGCAAATTCCTCATAGCCAACCCAGTATATGTGGAAAATGTGGCCTGGGCACACA
TTCTGGCAGCCAGGGCCTTCGAGACCCCAAGAAGTCTACAAGCATCCAAGGACAGTTCTACTACATCTC
AGATGACACCCCTCACAAAGCTATGATGATTTAAATTACACCCTGAGTAAGGAATGGGGCTCCGCCCT
AATGCCAGCTGGAGCCTTCCTCTGCCCTGCTCTACTGGCTTGCCCTTCTGCTGAAACTGTGAGCTTCC
TGCTACGTCCAGTCTACAGGTATAGACCTCTTTAACCGCCACTCGATCACACTGTCAAATAGCACGTT
CACTTTTTCTTACAAGAAAGCTCAGCGAGATCTGGGCTATGAGCCAATTGTCAACTGGGAGGAAGCAAAG
CAGAAAACCTCAGAGTGGATAGGACAATAGTGGAACAGCACAGGGAGATATTGGACACAAAGTCCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR205766 protein sequence
 Red=Cloning site Green=Tags(s)

MAGWSCLVTGAGGFVQRIIKMLVQEKELQEVRLDKVFRPETKEEF SKLQTKTKVTVLEGDILDAQCLR
 RACQGISVVIHTAAVIDVTGVI PRQTILDVNLKGTQNLLEACVQASVPAFIFCSSVDAAGPNSYKKIVLN
 GHEEQNHESTWSDPYYPYSKKMAEKAVLAANGSMLKNGGTLNLCALRPMYIYGERSPFIFNAIRALKNKG
 ILCVTGKFSIANPVYVENVAWAHILAARGLRDPKKSTSIQGQFYIISDDTPHQSYDDLNYTL SKEWGLRP
 NASWSLPLLLYLAFLLTVSFLLRPVYRPLFNRHSITLSNSTFTFSYKKAQRDLGYEPLVNWEEAK
 QKTSEWIGTIVEQHREILDTKCQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_008293

ORF Size: 1122 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_008293.1](#), [NM_008293.2](#), [NM_008293.3](#), [NM_008293.4](#), [NP_032319.1](#)

RefSeq Size: 1852 bp

RefSeq ORF: 1122 bp

Locus ID: 15492

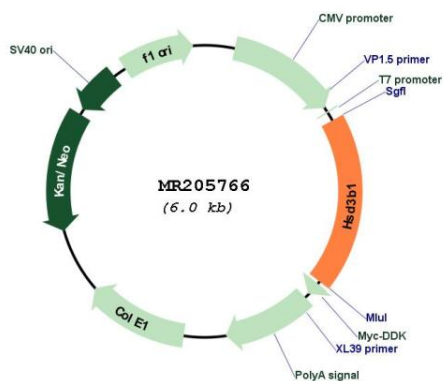
UniProt ID: [P24815](#)

Cytogenetics: 3 42.89 cM

MW: 42 kDa

Gene Summary: A bifunctional enzyme responsible for the oxidation and isomerization of 3beta-hydroxy-Delta(5)-steroid precursors to 3-oxo-Delta(4)-steroids, an essential step in steroid hormone biosynthesis. Specifically catalyzes the conversion of pregnenolone to progesterone, 17alpha-hydroxypregnenolone to 17alpha-hydroxyprogesterone, dehydroepiandrosterone (DHEA) to 4-androstenedione, and androstenediol to testosterone. Additionally, catalyzes the interconversion between 3beta-hydroxy and 3-oxo-5alpha-androstane steroids controlling the bioavailability of the active forms. Specifically converts dihydrotestosterone to its inactive form 5alpha-androstanediol, that does not bind androgen receptor/AR. Also converts androstanedione, a precursor of testosterone and estrone, to epiandrosterone. Expected to use NAD(+) as preferred electron donor for the 3-beta-hydroxy-steroid dehydrogenase activity and NADPH for the 3-ketosteroid reductase activity.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR205766