

Product datasheet for **RR205099**

Hsd3b1 (NM_001007719) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Hsd3b1 (NM_001007719) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Hsd3b1
Synonyms: MGC105549
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR205099 representing NM_001007719
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGCCTGGATGGAGCTGCCTGGTGACAGGAGCAGGAGGGTTTGTGGCCAGAGGATCATCCGGATGTTGG
TGCAGGAGAAAGAACTGCAGGAGGTCAGGGCTCTGGACAAAGTCTTCAGACCAGAAACCAAGGAGGAATT
CTCTAAGCTGCAGACAAAGGCCAAGGTGACAATGTTAGAAGGAGATATTCTGGATGCCAGTACCTGAGG
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GGCAGACCATCCTAGATGTCAATCTGAAAGGTACCCAGAACATATTGGAGGCCTGCGTCGAAGCCAGTGT
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TTCTGGCTGCCAGGGCCTTCGAGACCCCAAGAAGTCAAAAATGTCCAAGGACAGTTCTACTACATCTC
AGATGACACCCCTCACCAAGCTATGATGATTTAAATTGACCCCTGAGCAAGGAATGGGGCCTCCGCCTT
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TGCTGCGTCCATTTTACAACATAGGCCACCTTTAACTGCCACTGGTCACACTGTCAAATAGCAAGTT
CACTTTCTCTACAAGAAAGCTCAGAGAGATCTGGGCTATGTGCCACTTGTGAGTGGGAGGAGCAAG
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
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Protein Sequence: >RR205099 representing NM_001007719
 Red=Cloning site Green=Tags(s)

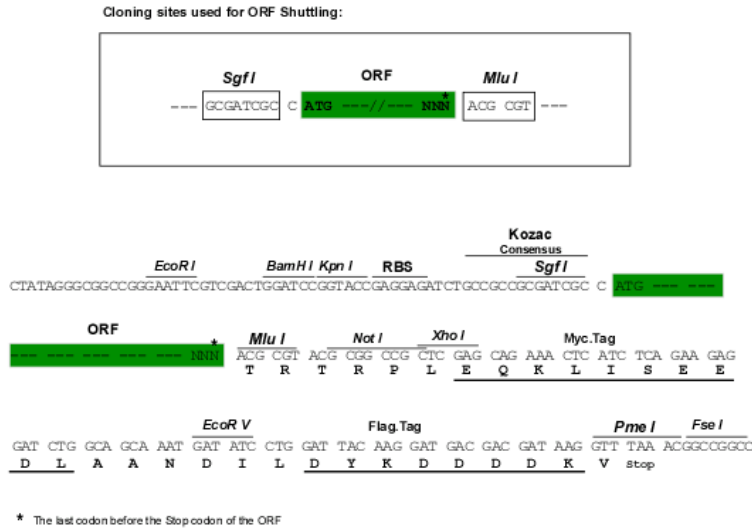
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 GHEEEHHESTWSDAYPYSKRMAEKAVLAANGSILKNGGTLHTCALRPMYIYGERSPFLSVMILAALKNKG
 ILNVTGKFSIANPVYVGNVAWAHILAARGLRDPKKSQNVQGFYYISDDTPHQSYDDLNCTLSKEWGLRL
 DSSWSLPLPLLYWLAFLLETVSVFLLRPFYNYRPPFNCHLVTLSNSKFTFSYKKAQRDLGYVPLVSWEEAK
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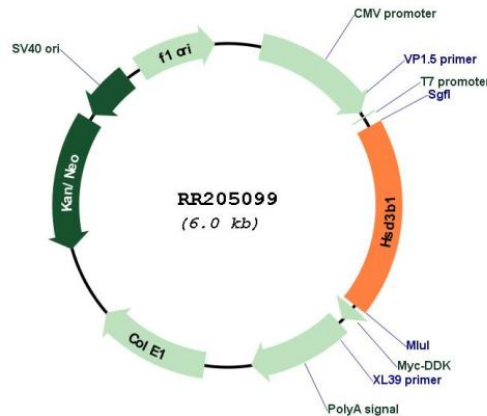
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001007719

ORF Size:	1119 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:	<ol style="list-style-type: none">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_001007719.3 , NP_001007720.3
RefSeq Size:	1640 bp
RefSeq ORF:	1122 bp
Locus ID:	360348
UniProt ID:	P22071
Cytogenetics:	2q34
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, dehydroepiandrosterone (DHEA) to 4-androstenedione, and androstenediol to testosterone (PubMed:1537836, PubMed:1985917). 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-androstenediol, that does not bind androgen receptor/AR. Also converts androstenedione, a precursor of testosterone and estrone, to epiandrosterone (PubMed:1537836). Expected to use NAD(+) as preferred electron donor for the 3beta-hydroxy-steroid dehydrogenase activity and NADPH for the 3-ketosteroid reductase activity (Probable).[UniProtKB/Swiss-Prot Function]