

Product datasheet for RC200471

GMDS (NM_001500) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GMDS (NM_001500) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GMDS
Synonyms:	GMD; SDR3E1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200471 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCACACGCCCGCACGCTGCCCCAGCGCCCGGGCTCCGGGGACGGCGAGATGGGCAAGCCCAGGA
ACGTGGCGCTCATCACCGGTATCACAGGCCAGGATGGTTCCTACCTGGCTGAGTTCCTGCTGGAGAAAGG
CTATGAGGTCCATGGAATTGTACGGCGGTCCAGTTCATTTAATACGGGTCAATTGAGCATCTGTATAAG
AATCCCCAGGCTCACATTGAAGGAAACATGAAGTTCACACTATGGCGATCTCACTGACAGTACCTGCCTTG
TGAAGATCATTAAATGAAGTAAAGCCACAGAGATCTACAACCTTGAGGCCAGAGCCACGTCAAAATTTTC
CTTTGACCTCGCTGAGTACACTGCGGACGTTGACGGAGTTGGCACTCTACGACTTCTAGATGCAAGTAAAG
ACTTGTGGCCTTATCAACTCTGTGAAGTCTACCAAGCCTCAACAAGTGAACCTTATGGGAAAGTGCAGG
AAATACCCAGAAAGGAGACCACCCCTTTCTATCCCGGTCAACCCTATGGGGCAGCAAACTCTATGCCTA
TTGGATTGTGGTGAACCTCCGTGAGGCGTATAATCTCTTTGCAGTGAACGGCATTCTCTTCAATCATGAG
AGTCCCAGAAAGAGGAGCTAATTTCTGTTACTCGAAAAATAGCCGGTCAGTAGCTAAGATTTACCTTGGAC
AACTGGAATGTTTCAGTTTGGGAAATCTGGATGCCAAACGAGATTGGGGCCATGCCAAGGACTATGTGGA
GGCTATGTGGTTGATGTTGCAGAAATCATTCTTGCACATTGGAAAAACCATTGTGTGGGAAGGAAGAATGAAA
ATGAAGTGGCAGATGTAAGAGACCCGGCAAAGTTCACGTGACTGTGGATCTCAAGTACTACCGGCAAC
TGAAGTGGACTTTCTGCAGGGCGACTGCACCAAAGCGAAACAGAAGCTGAACTGGAAGCCCCGGGTCTG
TTCGATGAGCTGGTGGGAGATGGTGCACGCCGACTGGAGCTCATGAGGACAAACCCCAATGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTAA



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Protein Sequence: >RC200471 protein sequence
Red=Cloning site Green=Tags(s)

MAHAPARCP SARGSGDGEMGKPRNVALITGITGQDGSYLAEFLLKGYEVHGI VRRSSSFNTGRIEHL YK
 NPQAHIEGNM KLHYGDLTDSTCLVKIINEVKPTEIYNLGAQSHVKISFDLAEY TADVDGVT LRLLD AVK
 TCGLINSVKFYQASTSELYGKVQEI PQKETT P FYRSPYGA AKL YAYWIVVNFREAYNLFAVNGILFNHE
 SPRRGANFVTRKISR SVAKIYLGLQLECFSLGNLDAKRDWGHAKDYVEAMWMLQND EPEDFVIATGEVHS
 VREFVEKSFLHI GKTI V WEGKNENEVGRCKETGKVHVTVDLKYRPT EVD FLQGDCTKAKQKLNWKPRVA
 FDELVREMVHADVELMRTNPNA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6388_g04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001500

ORF Size: 1116 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_001500.4](#)

RefSeq Size: 1700 bp

RefSeq ORF: 1119 bp

Locus ID: 2762

UniProt ID: [O60547](#)

Cytogenetics: 6p25.3

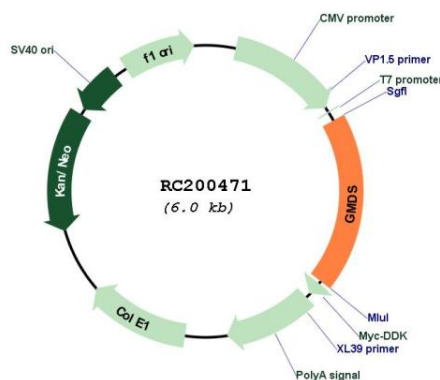
Protein Families: Druggable Genome

Protein Pathways: Amino sugar and nucleotide sugar metabolism, Fructose and mannose metabolism, Metabolic pathways

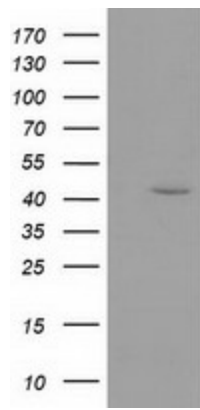
MW: 41.9 kDa

Gene Summary: GDP-mannose 4,6-dehydratase (GMD; EC 4.2.1.47) catalyzes the conversion of GDP-mannose to GDP-4-keto-6-deoxymannose, the first step in the synthesis of GDP-fucose from GDP-mannose, using NADP+ as a cofactor. The second and third steps of the pathway are catalyzed by a single enzyme, GDP-keto-6-deoxymannose 3,5-epimerase, 4-reductase, designated FX in humans (MIM 137020).[supplied by OMIM, Aug 2009]

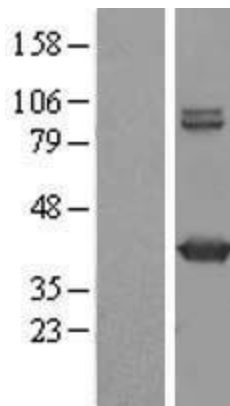
Product images:



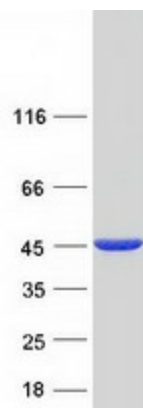
Circular map for RC200471



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GMDS (Cat# RC200471, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GMDS (Cat# [TA502141]). Positive lysates [LY419903] (100ug) and [LC419903] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419903]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200471 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GMDS protein (Cat# [TP300471]). The protein was produced from HEK293T cells transfected with GMDS cDNA clone (Cat# RC200471) using MegaTran 2.0 (Cat# [TT210002]).