

Product datasheet for **RC202132**

UDP glucose dehydrogenase (UGDH) (NM_003359) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	UDP glucose dehydrogenase (UGDH) (NM_003359) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	UDP glucose dehydrogenase
Synonyms:	DEE84; EIEE84; GDH; UDP-GlcDH; UDPGDH; UGD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC202132 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTTTGAATTAAGAAGATCTGTTGCATTGGTGCAGGCTATGTTGGAGGACCCACATGTAGTGTCAATTG
 CTCATATGTGTCCTGAAATCAGGGTAACGGTTGTTGATGTCAATGAATCAAGAATCAATCGGTGGAATTC
 TCCTACACTTCCTATTTATGAGCCAGGACTAAAAGAAGTGGTAGAATCCTGTCGAGGAAAAATCTTTTT
 TTTTCTACCAATATTGATGATGCCATCAAAGAAGCTGATCTTGTATTTATTTCTGTGAATACTCCAACAA
 AAACCTATGGAATGGGAAAGGCCGGCAGCAGATCTGAAGTATATTGAAGCTTGTGCTAGACGCATTGT
 GCAAACTCAAATGGGTACAAAATTGTGACTGAGAAAAGCACAGTTCGGTGCAGGAGCAGAAAAGTATC
 CGTCGCATATTTGATGCAAAACAAAACCAACTTGAATTTACAGGTGCTGTCCAACCTGAGTTTCTGG
 CAGAGGGAACAGCCATCAAGGACCTAAAGAACCAGACAGAGTACTGATTGGAGGGGATGAACTCCAGA
 GGCCAGAGAGCTGTGCAGGCCCTGTGTCTGTATATGAGCACTGGGTTCCAGAGAAAAGATCCTCACC
 ACTAATACTTGGTCTTCAGAGCTTCCAACTGGCAGCAAATGCTTTTCTTGCCAGAGAATAAGCAGCA
 TTAACCTCATAAGTGCTCTGTGTGAAGCAACAGGAGCTGATGTAGAAGAGGTAGCAACAGCGATTGGAAT
 GGACCAGAGAATTGAAACAAGTTTCTAAAAGCCAGTGTGGGTTTGGTGGGAGCTGTTTCCAAAAGGAT
 GTTCTGAATTTGGTTTATCTCTGTGAGGCTCTGAATTTGCCAGAAGTAGCTCGTTATTGGCAGCAGGTCA
 TAGACATGAATGACTACCAGAGGAGGAGTTTGCCTCCGGATCATAGATAGTCTGTTTAAACAGTAAC
 TGATAAGAAGATAGCTATTTGGGATTTGCATTTCAAAAAGGACTGGTGATAACAAGAGAATCTTCTAGT
 ATATATATTAGCAAATATTTGATGGATGAAGGTGCACATCTACATATATATGATCCAAAAGTACCTAGGG
 AACAAATAGTTGTGGATCTTTCTCATCCAGGTGTTTCAGAGGATGACCAAGTGTCCCGGCTCGTGACCAT
 TTCCAAGGATCCATATGAAGCATGTGATGGTGCCCATGCTGTTGTTATTTGCACTGAGTGGGACATGTTT
 AAGGAATTGGATTATGAACGCATTCATAAAAAAATGCTAAAGCCAGCCTTTATCTTCGATGGACGGCTG
 TCCTGGATGGGCTCCACAATGAACTACAAACCATTGGCTTCCAGATTGAAACAATTGGCAAAAAGGTGTC
 TTCAAAGAGAATTCATATGCTCCTTCTGGTGAATTCGGAAGTTTAGTCTTCAAGATCCACCTAACAAAG
 AACCTAAAGTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC202132 protein sequence
 Red=Cloning site Green=Tags(s)

MFEIKKICIGAGYVGGPTCSVIAHMCPEIRVTVVDVNESRINAWNSPTLPIYEPGLKEVVESECRGNL
 FSTNIDDAIKEADLVFISVNTPTKTYGMKGRAADLKYIEACARRIVQNSNGYKIVTEKSTVPVRAAESI
 RRIFDANTKPNLNLQVLSNPEFLAEGTAIKDLKNPDRVLIGGDETPGQRAVQALCAVYEHVVPREKILT
 TNTWSSELKLAANAFLAQRISINSISALCEATGADVEEVATAIGMDQRIGNKFLKASVFGGSCFQKD
 VLNLVYLCEALNLPEVARYWQQVIDMNDYQRRRFASRIIDSLFNTVTDKKAIAILGFATKDTGDTRESSS
 IYISKYLMDEGAHLHIYDPKVPREQIVVDLSHPGVSEDDQVSRLVTISKDPYEACDGAHAVVICTEWMF
 KELDYERIHKKMLKPAFIFDGRRLDGLHNELQTIQFQIETIGKKVSSKRIPYAPSGEIPKFSLQDPPNK
 KPKV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6139_a10.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_003359

ORF Size: 1482 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_003359.4](#)

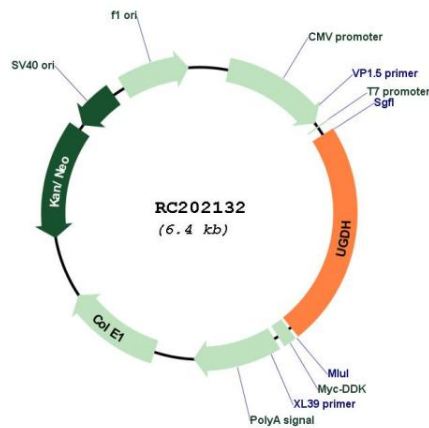
RefSeq Size: 3195 bp

RefSeq ORF: 1485 bp

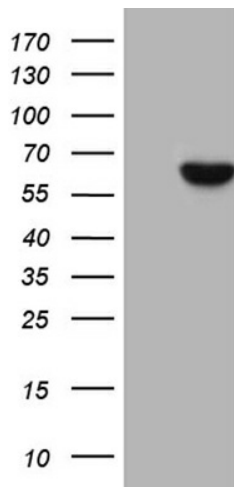
Locus ID: 7358

UniProt ID:	<u>O60701</u>
Cytogenetics:	4p14
Domains:	UDPG_MGDP_dh
Protein Pathways:	Amino sugar and nucleotide sugar metabolism, Ascorbate and aldarate metabolism, Metabolic pathways, Pentose and glucuronate interconversions, Starch and sucrose metabolism
MW:	55 kDa
Gene Summary:	The protein encoded by this gene converts UDP-glucose to UDP-glucuronate and thereby participates in the biosynthesis of glycosaminoglycans such as hyaluronan, chondroitin sulfate, and heparan sulfate. These glycosylated compounds are common components of the extracellular matrix and likely play roles in signal transduction, cell migration, and cancer growth and metastasis. The expression of this gene is up-regulated by transforming growth factor beta and down-regulated by hypoxia. Alternative splicing results in multiple transcript variants.[provided by RefSeq, May 2010]

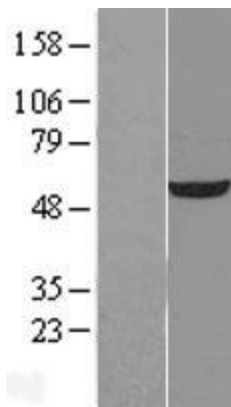
Product images:



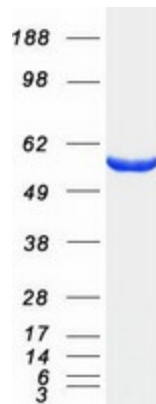
Circular map for RC202132



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY UGDH (Cat# RC202132, 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-UGDH (Cat# [TA810531])(1:2000). Positive lysates [LY401149] (100ug) and [LC401149] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401149]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202132 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified UGDH protein (Cat# [TP302132]). The protein was produced from HEK293T cells transfected with UGDH cDNA clone (Cat# RC202132) using MegaTran 2.0 (Cat# [TT210002]).