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Product datasheet for RC213439

UGT (UGT1A1) (NM_000463) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	UGT (UGT1A1) (NM_000463) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	UGT
Synonyms:	BILIQTL1; GNT1; HUG-BR1; UDPGT; UDPGT 1-1; UGT1; UGT1A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC213439 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCTGTGGAGTCCCAGGGCGGACGCCCACTTGTCCTGGGCCTGCTGCTGTGTGTGCTGGGCCCAGTGG
TGTCCCATGCTGGGAAGATACTGTTGATCCCAGTGGATGGCAGCCACTGGCTGAGCATGCTTGGGGCCAT
CCAGCAGCTGCAGCAGAGGGGACATGAAATAGTTGTCCTAGCACCTGACGCCTCGTTGTACATCAGAGAC
GGAGCATTTTACACCTTGAAGACGTACCCTGTGCCATTCCAAAGGGAGGATGTGAAAGAGTCTTTTGTTA
GTCTCGGGCATAATGTTTTTGAGAATGATTCTTTCCTGCAGCGTGTGATCAAAACATACAAGAAAATAAA
AAAGGACTCTGCTATGCTTTTGTCTGGCTGTTCCCACTTACTGCACAACAAGGAGCTCATGGCCTCCCTG
GCAGAAAGCAGCTTTGATGTCATGCTGACGGACCCTTTCCTTCCTTGCAGCCCCATCGTGGCCCAGTACC
TGTCTCTGCCCACTGTATTCTTCTTGCATGCACTGCCATGCAGCCTGGAATTTGAGGCTACCCAGTGCCC
CAACCCATTCTCCTACGTGCCCAGGCCTCTCTCCTCTCATTCAGATCACATGACCTTCCTGCAGCGGGTG
AAGAACATGCTCATTGCCTTTTCACAGAACTTTCTGTGCGACGTGGTTTATTCCCCGTATGCAACCCTTG
CCTCAGAATTCCTTCAGAGAGAGGTGACTGTCCAGGACCTATTGAGCTCTGCATCTGTCTGGCTGTTTAG
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CTTGTTAAGTGGCTACCCCAAAACGATCTGCTTGGTCACCCGATGACCCGTGCCTTTATCACCCATGCTG
GTTCCCATGGTGTTTATGAAAGCATATGCAATGGCGTTCCCATGGTGATGATGCCCTTGTTTGGTGATCA
GATGGACAATGCAAAGCGCATGGAGACTAAGGGAGCTGGAGTGACCCTGAATGTTCTGGAAATGACTTCT
GAAGATTTAGAAAATGCTCTAAAAGCAGTCATCAATGACAAAAGTTACAAGGAGAACATCATGCGCCTCT
CCAGCCTTCACAAGGACCGCCCGGTGGAGCCGCTGGACCTGGCCGTGTTCTGGGTGGAGTTTGTGATGAG
GCACAAGGGCGCGCCACACCTGCGCCCCGCAGCCCACGACCTCACCTGGTACCAGTACCATTCCTTGGAC
GTGATTGGTTTCCTCTTGGCCGTCGTGCTGACAGTGGCCTTCATCACCTTTAAATGTTGTGCTTATGGCT
ACCGGAAATGCTTGGGGAAAAAAGGGCGAGTTAAGAAAGCCCACAAATCCAAGACCCAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC213439 protein sequence
Red=Cloning site Green=Tags(s)

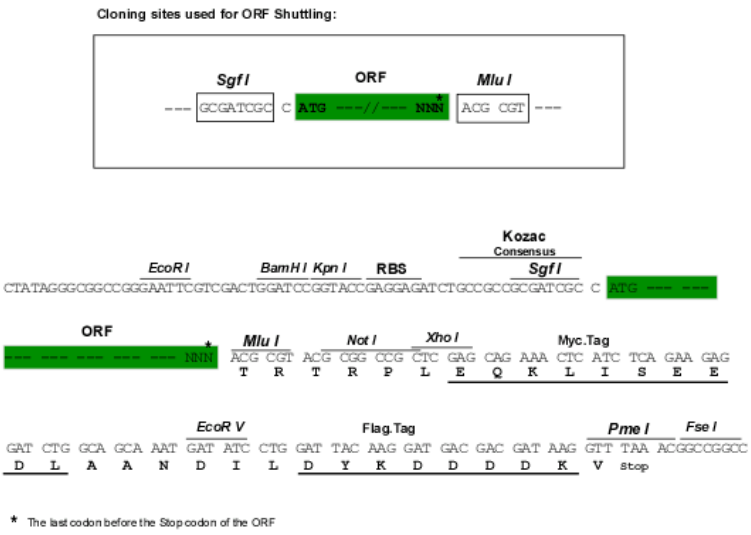
MAVESQGGRPLVLGLLLCVLGPVVSHAGKILLIPVDGSHWLSMLGAIQQLQQRGHEIVVLAPDASLYIRD
GAFYTLKTYPVPFQREDVKESFVSLGHNVFENDSFLQRVIKTYKKIKKDSAMLLSGCSHLLHNKELMASL
AESSFDVMLTDPFLPCSPIVAQYLSLPTVFFLHALPCSLEFEATQCPNPFSYVPRPLSSHSDHMTFLQRV
KNMLIAFSQNFLCDVVYSPYATLASEFLQREVTVQDLLSSASVWLFRSDFVKDYPRPIMPNMVFVGGINC
LHQNPLSQEFEAYINASGEHGIVVFSLGSMVSEIPEKKAMAIADALGKIPQTVLWRYTGTRPSNLANNTI
LVKWLPQNDLLGHPMTRAFITHAGSHGVYESICNGVPMVMMPLFGDQMDNAKRMETKGAGVTLNVLEMTS
EDLENALKAVINDKSYKENIMRLSSLHKDRPVEPLDLAVFWVEFVMRHKGAPHLRPAAHDLTWYQYHSLD
VIGFLLAVVLTVAFITFKCCAYGYRKCLGKKGRVKKAHKSKTH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6558_g10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000463

ORF Size: 1599 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_000463.3

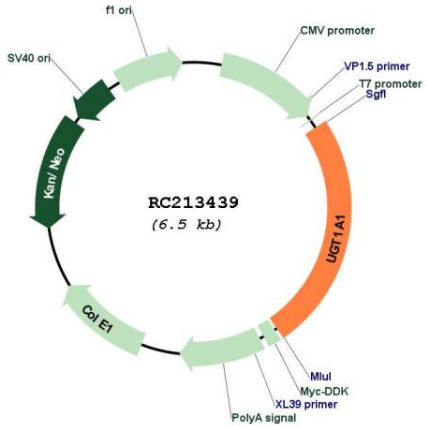
RefSeq Size: 2357 bp

RefSeq ORF: 1602 bp

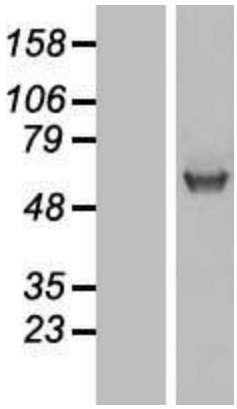
Locus ID: 54658

UniProt ID:	P22309
Cytogenetics:	2q37.1
Domains:	UDPGT
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Androgen and estrogen metabolism, Ascorbate and aldarate metabolism, Drug metabolism - cytochrome P450, Drug metabolism - other enzymes, Metabolic pathways, Metabolism of xenobiotics by cytochrome P450, Pentose and glucuronate interconversions, Porphyrin and chlorophyll metabolism, Retinol metabolism, Starch and sucrose metabolism
MW:	59.6 kDa
Gene Summary:	This gene encodes a UDP-glucuronosyltransferase, an enzyme of the glucuronidation pathway that transforms small lipophilic molecules, such as steroids, bilirubin, hormones, and drugs, into water-soluble, excretable metabolites. This gene is part of a complex locus that encodes several UDP-glucuronosyltransferases. The locus includes thirteen unique alternate first exons followed by four common exons. Four of the alternate first exons are considered pseudogenes. Each of the remaining nine 5' exons may be spliced to the four common exons, resulting in nine proteins with different N-termini and identical C-termini. Each first exon encodes the substrate binding site, and is regulated by its own promoter. The preferred substrate of this enzyme is bilirubin, although it also has moderate activity with simple phenols, flavones, and C18 steroids. Mutations in this gene result in Crigler-Najjar syndromes types I and II and in Gilbert syndrome. [provided by RefSeq, Jul 2008]

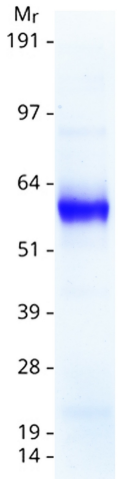
Product images:



Circular map for RC213439



Western blot validation of overexpression lysate (Cat# [LY424698]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213439 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified UGT1A1 protein (Cat# [TP313439]). The protein was produced from HEK293T cells transfected with UGT1A1 cDNA clone (Cat# RC213439) using MegaTran 2.0 (Cat# [TT210002]).