

Product datasheet for MC223356

Ogt (NM_139144) Mouse Untagged Clone

Product data:

| | |
|----------------------|---------------------------------------------------------------------------------|
| Product Type: | Expression Plasmids |
| Product Name: | Ogt (NM_139144) Mouse Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Ogt |
| Synonyms: | 1110038P24Rik; 4831420N21Rik; AI115525; Ogtl |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Cell Selection: | Neomycin |
| Fully Sequenced ORF: | >MC223356 representing NM_139144 Red=Cloning site Blue=ORF Orange=Stop codon |

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGGCGTCTTCCGTGGGCAACGTGGCCGACGTACAGAACCAACGAAACGTATGCTTTCCTTCCAAGGGT
TAGCTGAGTTGGCACATCGAGAATATCAGGCAGGAGATTTGAGGCAGCTGAGAGACTGCATGCAGCT
CTGGAGACAAGAGCCTGACAATACTGGTGTCTTTTATTACTTTCATCTATACACTTCCAGTGTGCAAGG
CTGGACAGATCTGCTCATTTTAGCACCTTGCAATTAACAGAATCCCTTCTAGCAGAAGCCTATTTCGA
ATTTGGGAAATGTGTACAAGGAAAGAGGGCAGTTGCAGGAAGCAATCGAGCATTATCGACATGCCTTGCG
GCTGAAGCCTGATTTCAATTGATGGTTATATTAACCTGGCAGCAGCCTTGGTAGCAGCAGGTGACATGGAA
GGAGCAGTACAAGCCTATGTCTCTGCTCTTCAGTACAATCCTGATTTGTACTGTGTTGCGAGTGACCTGG
GGAACCTGCTCAAAGCCCTGGGTCGCTTGGGAAGCAAGGCATGTTATTTGAAAGCAATTGAGACGCA
ACCAAACCTTTCAGTAGCCTGGAGTAATCTCGGCTGTGTTTTCAATGCACAAGGGGAGATTTGGCTGGCT
ATTCATCACTTTGAAAAGGCTGTCACCCCTGACCCAAATTTCTGGATGCTTATATCAATTTAGGAAATG
TCTTGAAAGAGGCACGCATTTTGGACAGAGCTGTCGCAGCTTATCTTCGTGCCTTAAGTTTGAGCCCAA
TCATGCGGTGGTGCACGGCAACCTGGCTTGTGTACTACGAGCAAGGCCTAATAGACCTGGCCATTGAT
ACCTACAGGAGAGCTATCGAACTGCAACCCATTTCCCGATGCTTACTGCAACCTAGCAAATGCTCTCA
AAGAGAAGGGCAGTGTTGCTGAAGCAGAAGATTGTTATAACACAGCTCTTCGTCTGTGCTACTCATGC
AGACTCTTTGAATAACCTTGCCAACATCAAACGGGAACAGGGCAACATTGAAGAGGCAGTTGCGCTGTAT
CGCAAAGCATTAGAAGTCTTCCAGAGTTTGTGCTGCACATTCCAATTTAGCAAGTGTACTGCAACAGC
AGGGCAAGCTGCAGGAAGCACTGATGCACTATAAAGAAGCCATACGAATTAGCTCCTACATTTGCTGATGC
TTATTCCAATATGGGAAACTCTAAAGGAGATGCAGGATGTGCAGGGCGCTTTCAGTGTATACTCGT
GCCATCCAGATTAATCCTGCCTTTGCTGATGCACACAGCAATCTGGCCTCCATTCACAAGGATTCAGGGA
ATATCCAGAAGCAATAGCTTCTACCGCACAGCTCTGAACTTAAGCCTGACTTTCCTGATGCTTATTG
TAACCTGGCTCATTGCCTACAGATTGTCTGTGATTGGACAGACTATGATGAGCGGATGAAGAAATGGTT
AGTATTGTAGCTGAGCAGCTAGAGAAGAATAGACTGCCTTCTGTCCATCCTCACCATAGCATGCTGTACC



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CTCTTTCCCATGGCTTCAGGAAGGCTATTGCAGAGAGGCATGGGAATCTCTGCTTGGATAAGATTAATGT
 CCTTCATAAACCACCATATGAACATCCAAAAGACTTGAAGCTCAGTGATGGCCGATTGCGTGTAGGCTAT
 GTGAGTTCTGACTTCGGGAATCACCTACTTCACACCTTATGCAGTCTATTCCAGGCATGCATAATCCTG
 ATAAGTTTGAGGTATTCTGCTATGCCTTGAGCCCGGATGATGGTACAAACTTTCGAGTGAAGGTGATGGC
 GGAAGCCAATCATTTTATTGATCTTTCTCAGATTCCTTGAATGGAAAAGCAGCCGACCCATCCACCAA
 GATGGAATTCACATCCTTGTGAATGAATGGGTATACCAAGGGTGTCTCGAATGAGCTCTTTGCTCTTA
 GGCCAGTCTCCTATTCCAGCCATGTGGCTGGGCTACCCTGGGACTAGTGGTGCACCTGTTTCATGGATTAC
 CATCACTGATCAGGAACTTCCCGAGTGAAGTTGCAGAGCAGTATTCTGAGAAACTGGCTTATATGCC
 CATACTTTCTTTATTGGTATCATGCTAATATGTTCCCTCACCTGAAGAAAAAGCAGTCATCGATTTTA
 AATCCAATGGGCACATTTATGATAATCGGATAGTTCTGAATGGCATCGATCTCAAAGCATTTCTCGATAG
 CCTACCCGATGTGAAGATTGTCAAGATGAAATGTCCTGATGGAGGTGACAATCCAGACAGCAGTAACACA
 GCTCTTAATATGCCCGTTATTCCCATGAATACGATTGCAGAAGCAGTAATTGAAATGATTAACAGAGGGC
 AGATTCAGATAACAATTAACGGATTCAGTATTAGCAATGGACTGGCGACTACACAGATTAATAATAAGGC
 TGCAACCCGAGAGGAAGTCCCGTACCATTATTGTAACCACCCGTTCCAGTATGGGCTACCAGAAGAT
 GCCATTGTGACTGTAACTTAATCAGTTATATAAAATTGACCCATCTACCCTGCAGATGTGGGCAATA
 TTCTGAAACGTGTGCCTAACAGCGTGTCTTGGCTGTTGCGTTTTCCAGCAGTAGGAGAACCCAATATTCA
 ACAATATGCACAAAATATGGGCCTTCCCGAGAACCGTATCATTCTCACCTGTGGCTCCTAAAGAGGAG
 CATGTCAGGAGAGGTGAGTGGCTGATGCTGCCTGGATACTCCTTTGTGAATGGACACACCACAGGGA
 TGGATGTTCTCTGGGCAGGAACCCCATGGTGACTATGCCAGGAGAGACTCTTGCCTCTCGAGTTGCAGC
 TTCTCAGCTTACTTGTCTAGGATGTCTCGAGCTCATTGCTAAAAGCAGACAGGAATATGAAGACATAGCT
 GTGAAACTGGGAACCGATCTAGAATACCTGAAGAAAATTCGTGGCAAAGTCTGGAACAGAGAATATCTA
 GCCCTCTGTTCAACACCAACAATACACAATGGAATTAGAGCGACTTTATCTGCAGATGTGGGAGCATT
 TGCAGCTGGCAACAACTGACCACATGATTAAGCCTGTTGAAGTCACCGAGTCAGCCTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

SgfI-MluI

ACCN:

NM_139144

Insert Size:

3141 bp

OTI Disclaimer:

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_139144.4](#), [NP_631883.2](#)

RefSeq Size:

5415 bp

RefSeq ORF:

3141 bp

Locus ID: 108155

UniProt ID: [Q8CGY8](#)

Cytogenetics: X D

Gene Summary: Catalyzes the transfer of a single N-acetylglucosamine from UDP-GlcNAc to a serine or threonine residue in cytoplasmic and nuclear proteins resulting in their modification with a beta-linked N-acetylglucosamine (O-GlcNAc) (PubMed:29465778). Glycosylates a large and diverse number of proteins including histone H2B, AKT1, EZH2, PFKL, KMT2E/MLL5, MAPT/TAU and HCFC1. Can regulate their cellular processes via cross-talk between glycosylation and phosphorylation or by affecting proteolytic processing. Probably by glycosylating KMT2E/MLL5, stabilizes KMT2E/MLL5 by preventing its ubiquitination (By similarity).Involved in insulin resistance in muscle and adipocyte cells via glycosylating insulin signaling components and inhibiting the 'Thr-308' phosphorylation of AKT1, enhancing IRS1 phosphorylation and attenuating insulin signaling (By similarity). Involved in glycolysis regulation by mediating glycosylation of 6-phosphofructokinase PFKL, inhibiting its activity. Component of a THAP1/THAP3-HCFC1-OGT complex that is required for the regulation of the transcriptional activity of RRM1. Plays a key role in chromatin structure by mediating O-GlcNAcylation of 'Ser-112' of histone H2B: recruited to CpG-rich transcription start sites of active genes via its interaction with TET proteins (TET1, TET2 or TET3). As part of the NSL complex indirectly involved in acetylation of nucleosomal histone H4 on several lysine residues. O-GlcNAcylation of 'Ser-75' of EZH2 increases its stability, and facilitating the formation of H3K27me3 by the PRC2/EED-EZH2 complex (By similarity). Regulates circadian oscillation of the clock genes and glucose homeostasis in the liver. Stabilizes clock proteins ARNTL/BMAL1 and CLOCK through O-glycosylation, which prevents their ubiquitination and subsequent degradation. Promotes the CLOCK-ARNTL/BMAL1-mediated transcription of genes in the negative loop of the circadian clock such as PER1/2 and CRY1/2 (PubMed:23337503, PubMed:23395176). O-glycosylates HCFC1 and regulates its proteolytic processing and transcriptional activity (By similarity). Regulates mitochondrial motility in neurons by mediating glycosylation of TRAK1 (By similarity). Glycosylates HOXA1 (PubMed:29465778).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).