UDP-N-Acetylglucosamine--Peptide N-Acetylglucosaminyltransferase 110 Kda Subunit (OGT) Rabbit Recombinant Protein

PRODUCT OVERVIEW

Product Name	UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltransferase 110 kDa subunit (OGT), Recombinant Protein
Full Product Name	Recombinant Rabbit UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltransferase 110 kDa subunit (OGT), partial
Product Gene Name	OGT recombinant protein
Sequence	MASSVGNVAD STEPTKRMLS FQGLAELAHR EYQAGDFEAA ERHCMQLWRQ EPDNTGVLLL LSSIHFQCRR LDRSAHFSTL AIKQNPLLAE AYSNLGNVYK ERGQLQEAIE HYRHALRLKP DFIDG
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	116,939 Da
Sequence Positions	1-125. Partial.
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for P81436
Species	Rabbit
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for OGT recombinant protein	This gene encodes a glycosyltransferase that catalyzes the addition of a single N-acetylglucosamine in O-glycosidic linkage to serine or threonine residues. Since both phosphorylation and glycosylation compete for similar serine or threonine residues, the two processes may compete for sites, or they may alter the substrate specificity of nearby sites by steric or electrostatic effects. The protein contains multiple tetratricopeptide repeats that are required for optimal recognition of substrates. Alternatively spliced transcript variants encoding distinct isoforms have been found for this gene.
Other Notes	Small volumes of OGT recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for OGT purchase	MBS957403 is a recombinant protein targeting OGT. Also known as Recombinant Rabbit UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltransferase 110 kDa subunit (OGT), partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for OGT. It may not necessarily be applicable to this product.

NCBI GI #	291407677
NCBI GeneID	100354727

NCBI Accession #	XP_002720149.1
UniProt Primary Accession #	P81436
UniProt Secondary Accession #	G1TCQ9
UniProt Related Accession #	P81436
GenBank Nucleotide #	XM_002720103.3
NCBI Official Full Name	UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltransferase 110 kDa subunit isoform X1
NCBI Official Symbol	OGT
UniProt Protein Name	UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltransferase 110 kDa subunit
UniProt Synonym Protein Names	O-GlcNAc transferase subunit p110; O-linked N-acetylglucosamine transferase 110 kDa subunit; OGT
Protein Family	Methylated-DNA--protein-cysteine methyltransferase
UniProt Gene Name	OGT
UniProt Synonym Gene Names	OGT
NCBI Protein Information	UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltransferase 110 kDa subunit
UniProt Comments for OGT	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). Glycosylates a large and diverse number of proteins including histone H2B, AKT1, EZH2, PFKL, KMT2E, 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, stabilizes KMT2E by preventing its ubiquitination. 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. 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. 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. O-glycosylates HCFC1 and regulates its proteolytic processing and transcriptional activity.
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