



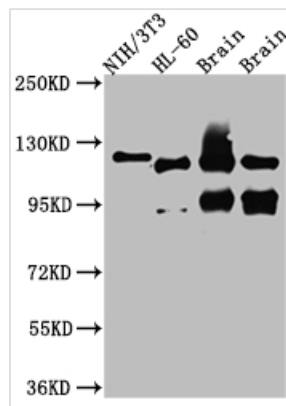
OGT Recombinant Monoclonal Antibody

Product Code	CSB-RA232619A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O15294
Immunogen	A synthesized peptide derived from human OGT / O-Linked N-Acetylglucosamine Transferase
Species Reactivity	Human, Mouse, Rat
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	<p>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/MLL5, MAPT/TAU and HCFC1. Can regulate their cellular processes via cross-talk between glycosylation and phosphorylation or by affecting proteolytic processing. 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 (PubMed:22923583). 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) (PubMed:22121020, PubMed:23353889). As part of the NSL complex indirectly involved in acetylation of nucleosomal histone H4 on several lysine residues (PubMed:20018852). O-GlcNAcylation of 'Ser-75' of EZH2 increases its stability, and facilitating the formation of H3K27me3 by the PRC2/EED-EZH2 complex (PubMed:24474760). 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:12150998, PubMed:18288188, PubMed:19377461, PubMed:19451179, PubMed:20018868, PubMed:20200153, PubMed:21285374, PubMed:15361863).</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG



Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Neuroscience; Signal transduction
Gene Names	OGT
Clone No.	8G7

Image

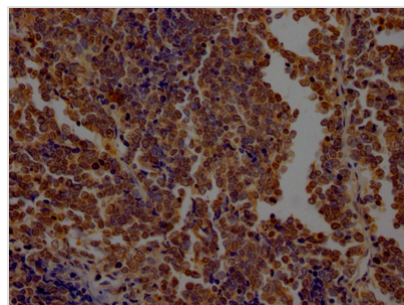


Western Blot

Positive WB detected in: NIH/3T3 whole cell lysate, HL-60 whole cell lysate, Rat Brain whole cell lysate, Mouse Brain whole cell lysate
All lanes: OGT antibody at 1:1000

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 117, 104, 116, 75 kDa
Observed band size: 117 kDa



IHC image of CSB-RA232619A0HU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

OGT, a conserved O-GlcNAc transferase, modifies the function, stability, and localization of intracellular proteins by O-GlcNAcylation of their serine and threonine residues. OGT and OGA work together to maintain cellular O-GlcNAc homeostasis, which is crucial for a range of cellular functions such as metabolism, stress responses, and proteostasis. The mammalian cell cycle regulator host cell factor C1 is proteolytically cleaved and activated by OGT (HCF-1). In *C. elegans* GABA neurons, it also has non-catalytic activities in epithelial adherence junctions and an EEL-1-dependent E3 ubiquitin ligase complex. In most metazoans, knocking down OGT is lethal at either the single-cell or developmental level.

The recombinant OGT antibody is a monoclonal antibody molecule expressed by using recombinant DNA and protein engineering technology to clone the genes encoding the OGT antibody into a plasma vector and then by transfecting the vector clone into the appropriate recipient mammalian cells for production. It was purified using Affinity-chromatography. And it shows reactivity with OGT protein from Human, Mouse, Rat. This recombinant OGT antibody can be used



in the ELISA, WB, IHC.