Store at -20°C

#82332

O-GlcNAc MultiMab™ Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Isotype
W Endogenous	All	Rabbit IgG**

Background: A distinct form of protein glycosylation, beta-linked N-acetyl-glucosamine (GlcNAc) moieties can be added to serine or threonine residues of proteins (1,2). This differs from other forms of glycosylation, as it typically is a single moiety rather than the complex branched sugars that are more commonly studied. It is thought that these modifications happen in a much more dynamic cycle more reminiscent of phosphorylation modifications (3). GlcNAc modified proteins are found in the cytoplasm and nucleus and are modulated by means of specific O-GlcNAc transferases (OGT) as well as GlcNAcase activity that can be inhibited using the Thiamet-G (TMG) inhibitor. Mass spectrometry analysis of this modification has been complicated due to the loss of the GlcNAc group during ionization and fragmentation, but methods and technologies such as electron transfer dissociation (ETD) are opening up new avenues to study these modifications. O-GlcNAc could play an important role in many cellular processes, including metabolism, growth, morphogenesis, apoptosis, transcription, and it may play a critical role in cancer.(4)

Specificity/Sensitivity: O-GlcNAc (E4H3V) Rabbit mAb specifically recognizes endogenous levels of O-GlcNAc on proteins in β-O-glycosidic linkage to both serine and threonine.

Source/Purification: MultiMab™ rabbit monoclonal mix antibodies are prepared by combining individual rabbit monoclonal clones in optimized ratios for the approved applications. Each antibody in the mix is carefully selected based on motif recognition and performance in multiple assays. Each mix is engineered to yield the broadest possible coverage of the modification being studied while ensuring a high degree of specificity for the modification or motif.

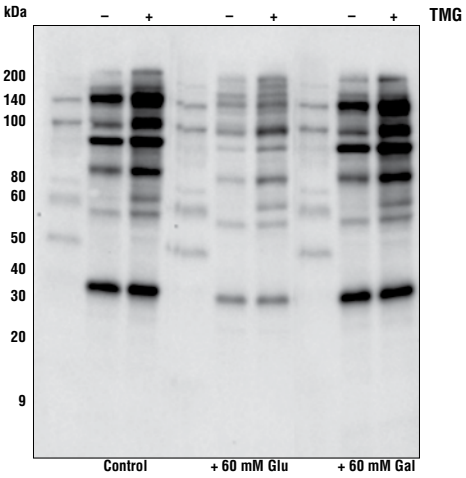
Background References:

(1) Comer, F.I. et al. (2001) *Anal Biochem* 293, 169-77.

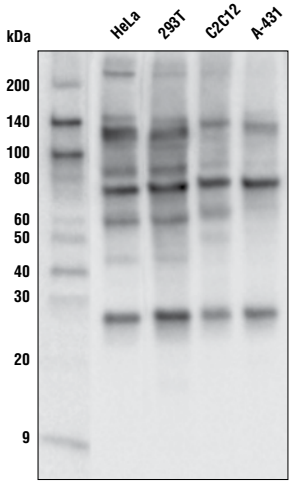
(2) Slawson, C. and Hart, G.W. (2011) *Nat Rev Cancer* 11, 678-84.

(3) Hart, G.W. and Akimoto, Y. (2009) Essentials of Glycobiology

(4) Capotosti, F. et al. (2011) *Cell* 144, 376-88.



Western blot analysis of HeLa cells untreated (-) or treated (+) with 10 µM Thiamet G (TMG) for 6 hours, using O-GlcNAc MultiMab™ Rabbit mAb with no blocking (left), blocking with free N-acetyl-D-glucosamine (center), or N-acetyl-D-galactosamine (right).



Western blot analysis of various cell lines with O-GlcNAc MultiMab™ Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.