

#9875 Store at -20C

O-GlcNAc (CTD110.6) Mouse mAb



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: WB	Reactivity: All	Sensitivity: Endogenous	Source/Isotype: Mouse IgM
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

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.

Specificity / Sensitivity

O-GlcNAc (CTD110.6) Mouse mAb specifically recognizes endogenous levels of O-GlcNAc on proteins in β -O-glycosidic linkage to both serine and threonine.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a peptide containing serine-O-linked N-acetylglucosamine (O-GlcNAc).

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. 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 (3).

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

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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