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#12938**O-GlcNAc (CTD110.6) Mouse mAb (HRP Conjugate)**

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:
W	All	Endogenous	Mouse IgM
Product Usage Information	Application	Dilution	
	Western Blotting	1:1000	
Storage	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.		
Specificity/Sensitivity	O-GlcNAc (CTD110.6) Mouse mAb (HRP Conjugate) 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).		
Description	This Cell Signaling Technology® antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated O-GlcNAc (CTD110.6) Mouse mAb #9875.		
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	<ol style="list-style-type: none"> Comer, F.I. et al. (2001) <i>Anal Biochem</i> 293, 169-77. Slawson, C. and Hart, G.W. (2011) <i>Nat Rev Cancer</i> 11, 678-84. Capotosti, F. et al. (2011) <i>Cell</i> 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	W: Western Blotting		
Cross-Reactivity Key	All: All Species Expected		
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