

# O-GlcNAc (CTD110.6): sc-59623

## BACKGROUND

O-GlcNAc (O-linked N-acetylglucosamine) is a form of protein glycosylation found exclusively in the nucleus and cytoplasm of eukaryotic cells. Many proteins are modified at their serine and threonine hydroxyl groups by the attachment of O-GlcNAc. Proteins that regulate trafficking into and out of the nuclear pore are extensively O-GlcNAcylated. Phosphorylated O-GlcNAc proteins form reversible multimeric complexes with other proteins and these associations are often regulated by phosphorylation. O-GlcNAc proteins may play a key role in pathogenesis of tumors and various cancer cells. O-GlcNAc residues regulate the assembly of the preinitiation complex and are therefore important in transcriptional initiation. Cytoskeletal and membrane O-GlcNAc proteins maintain erythrocyte cell shape and regulate the degradation of proteins responsible for lesions in Alzheimer's disease.

## REFERENCES

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## SOURCE

O-GlcNAc (CTD110.6) is a mouse monoclonal antibody raised against a peptide containing serine-O-linked N-acetylglucosamine.

## PRODUCT

Each vial contains 200  $\mu$ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

O-GlcNAc (CTD110.6) is recommended for detection of Ser-O-GlcNAc and Thr-O-GlcNAc in a broad range of species, including mammals, insects, worms, plants and filamentous fungi by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)]; non cross-reactive with peptide determinants or other closely-related carbohydrate antigens.

Positive Controls: HeLa nuclear extract: sc-2120, A549 cell lysate: sc-2413 or mouse brain extract: sc-2253.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml).

## SELECT PRODUCT CITATIONS

- Xing, D., et al. 2011. O-GlcNAc modification of NF $\kappa$ B p65 inhibits TNF- $\alpha$ -induced inflammatory mediator expression in rat aortic smooth muscle cells. *PLoS ONE* 6: e24021.
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## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **O-GlcNAc (RL2): sc-59624** for O-GlcNAc antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.