Product Information

Anti-β-O-Linked N-Acetylglucosamine Antibody, Mouse Monoclonal

Clone CTD110.6, purified from hybridoma cell culture

O7764

Product Description

Anti-β-O-Linked N-Acetylglucosamine antibody, Mouse monoclonal is derived from the hybridoma CTD110.6 produced by the fusion of mouse myeloma cells (P3X63-Ag8.653 cells) and cells from BALB/c mice immunized with a synthetic peptide YSPTS(O-GlcNAc)PSK conjugated to KLH.[1] The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Cat. No. ISO2.

Anti-β-O-Linked N-Acetylglucosamine antibody (O-GlcNAc) recognizes O-GlcNAc in β-O-glycosidic linkage to both serine and threonine and does not cross react with α-linked Ser/Thr-O-GlcNAc, α-linked Ser-O-linked N-acetylgalactosamine or N-linked oligosaccharides on ovalbumin and immunoglobulin G.[1] It may be used in ELISA,[1] immunoblotting,[1, 2] immunoprecipitation[1], immunohistochemistry,[3] and immunocytochemistry.[2]

The bands detected by immunoblotting are inhibited by N-Acetyl-D-glucosamine, Cat. No. A8625.

O-Linked N-Acetylglucosamine (O-GlcNAc) posttranslational modification is present in all higher eukaryotes and distributed on proteins involved in very diverse aspects of cellular physiology. Addition or removal of this modification in a target protein is important for histone remodeling/transcription, proliferation, apoptosis, and proteasomal degradation.[4-6] Deletion of the enzyme that is responsible for the addition of O-GlcNAc to proteins (O-GlcNAc transferase, OGT) is lethal at the single cell level in knockout mice. Alterations in O-GlcNAc metabolism are found in various human diseases like diabetes mellitus and Alzheimer disease. Modification of proteins by O-GlcNAc resembles other reversible protein modifications like phosphorylation. In some proteins, O-GlcNAc modification may compete with phosphate at some sites of attachment.[4-6]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~2 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.2-0.4 µg/mL is recommended using total cell extract of HeLa cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend deter–mining optimal working dilutions by titration.

References

1. Comer, F.I., et al., Anal. Biochem., 293, 169-177 (2001).
2. Kneass, Z.T., and Marchase, R.B., J. Biol. Chem., 279, 45759-45765 (2004).
3. Tian, E., et al., J. Biol. Chem., 279, 50382-50390 (2004).
4. Vosseller, K., et al., Biochimie, 83, 575-581 (2001).
5. Love, D.C., and Hanover, J.A., Science STKE, 2005(312):re13 (2005).
6. Wells, L., et al., Science, 291, 2376-2378 (2001)

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