

# Product Datasheet

## O-GlcNAc Antibody (HGAC85) - BSA Free NB300-614

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

[www.novusbio.com](http://www.novusbio.com)



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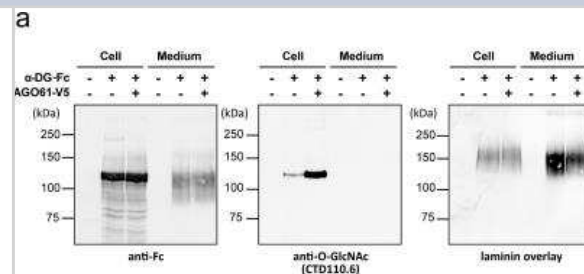
**NB300-614**

O-GlcNAc Antibody (HGAC85) - BSA Free

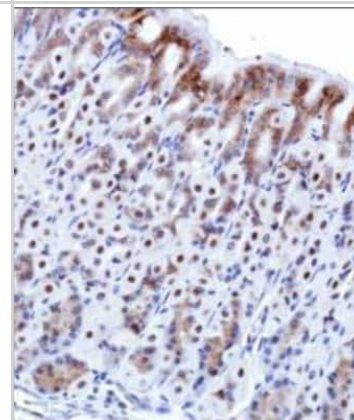
<b>Product Information</b>	
<b>Unit Size</b>	0.1 ml
<b>Concentration</b>	This product is unpurified. The exact concentration of antibody is not quantifiable.
<b>Storage</b>	Store at -20C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	HGAC85
<b>Preservative</b>	0.1% Sodium Azide
<b>Isotype</b>	IgG3 Kappa
<b>Purity</b>	Unpurified
<b>Buffer</b>	Ascites
<b>Product Description</b>	
<b>Description</b>	Novus Biologicals Mouse O-GlcNAc Antibody (HGAC85) - BSA Free (NB300-614) is a monoclonal antibody validated for use in IHC, WB, ELISA, ICC/IF, IP and CHIP. Anti-O-GlcNAc Antibody: Cited in 11 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Mouse
<b>Species</b>	Human, All Species, Primate
<b>Reactivity Notes</b>	All Species. Human reactivity reported in scientific literature (PMID: 28973823). Chlorocebus sabaeus (Green monkey) reported in PMID 24256719.
<b>Specificity/Sensitivity</b>	Recognizes beta-1,3 linked O-linked N-acetylglucosamine (O-GlcNAc) residues of streptococcal group A carbohydrate as well as O-GlcNAc glycosylated proteins
<b>Immunogen</b>	Heat-killed, pepsin-treated group A streptococci ( <i>Streptococcus pyogenes</i> )
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Immunohistochemistry-Paraffin, Chromatin Immunoprecipitation, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP)
<b>Recommended Dilutions</b>	Western Blot 1:500-1:1000, Chromatin Immunoprecipitation 1:10-1:500. Use reported in scientific literature (PMID 20368426), ELISA 1:100-1:2000, Immunohistochemistry 1:200. Use reported in scientific literature (Zhang , et al), Immunocytochemistry/ Immunofluorescence 1:100 - 1:200. Use reported in scientific literature (Hamiel CR et al), Immunoprecipitation 1:10-1:500. Use reported in scientific literature (Hamiel CR et al), Immunohistochemistry-Paraffin 1:200, Chromatin Immunoprecipitation (ChIP) 1:10-1:500
<b>Application Notes</b>	In Western blot, this antibody detects several proteins representing O-GlcNAc glycoproteins. Immunofluorescence staining of O-GlcNAc in cells results in labeling of the nuclear envelope and pores, nucleolus, and cytoplasm. This staining pattern is consistent with other methods of detecting O-GlcNAc moieties. DO NOT USE WITH DILUENTS CONTAINING GLYCOSYLATED PROTEINS.

## Images

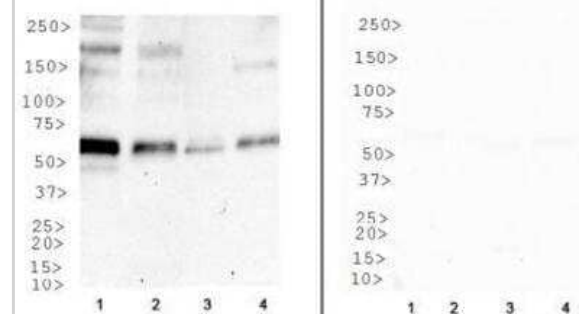
Western Blot: O-GlcNAc Antibody (HGAC85) [NB300-614] - alpha-DG-Fc was transiently transfected with or without AGO61 into COS1 cells. alpha-DG-Fc recombinant proteins were collected from cell lysates and culture media using protein A resin and analyzed for laminin overlay and Western blot using anti-Fc and anti-O-GlcNAc antibodies. Image collected and cropped by CiteAb from the following publication ([nature.com/articles/srep03288](https://www.nature.com/articles/srep03288)), licensed under a CC-BY license.



Immunohistochemistry-Paraffin: O-GlcNAc Antibody (HGAC85) [NB300-614] - IHC staining of O-GlcNAc in mouse colon using DAB with hematoxylin counterstain.

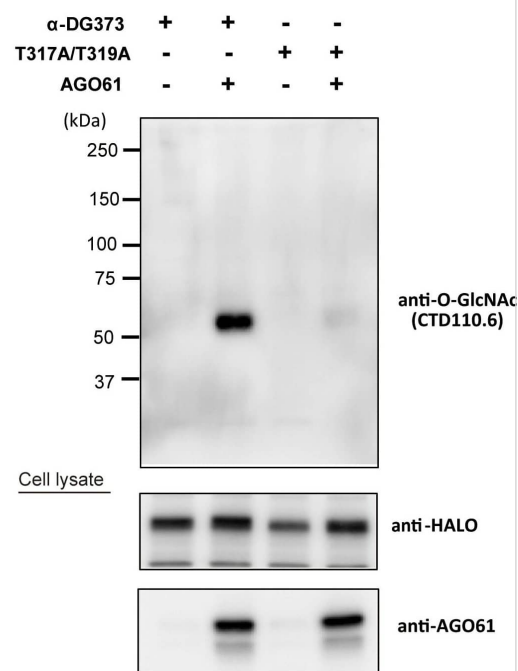


Western Blot: O-GlcNAc Antibody (HGAC85) [NB300-614] - Western blot analysis of O-GlcNAc expression in 1) HeLa, 2) NTERA-2, 3) PC-12 and 4) COS-7 cell lysates using untreated antibody on the left side and antibody preincubated with 50 μM GlcNAc (see Notes).



Western Blot: O-GlcNAc Antibody (HGAC85) [NB300-614] - AGO61 modifies GlcNAc residues at specific sites on  $\alpha$ -DG. (a)  $\alpha$ -DG-Fc was transiently transfected with or without AGO61 into COS1 cells.  $\alpha$ -DG-Fc recombinant proteins were collected from cell lysates & culture media using protein A resin & analyzed for laminin overlay & Western blot using anti-Fc & anti-O-GlcNAc antibodies. (b)  $\alpha$ -DG373-HALO & its mutant T317A/T319A were transiently transfected with or without LARGE-myc into COS7 cells. HALO-fused proteins were collected from medium using HALO resin followed by digestion with TEV protease & then analyzed by laminin overlay. Cell lysates were analyzed for the expression of HALO-fused proteins & LARGE-myc by Western blot using anti-HALO & anti-myc antibodies. The full-length blots with anti-HALO & anti-myc antibodies are presented in Supplementary Figs. S7f & S7g, respectively. (c)  $\alpha$ -DG373-HALO & its mutant T317A/T319A were transiently transfected with or without AOG61 into COS7 cells. HALO-fused proteins were collected from the cell lysates using HALO resin followed by digestion with TEV protease & then analyzed by Western blot using an anti-O-GlcNAc antibody (CTD110.6). The cell lysates were analyzed for the expression of HALO-fused proteins & AGO61 by Western blot using anti-HALO & anti-AGO61 antibodies. The full-length blots with anti-HALO & anti-AGO61 antibodies are presented in Supplementary Figs. S7h & S7i, respectively. Image collected & cropped by CiteAb from the following publication (<https://www.nature.com/articles/srep03288>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

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Purified  $\alpha$ -DG373 from cell lysates

## Publications

- Akinbiyi EO, Abramowitz LK, Bauer BL et al. Blocked O-GlcNAc cycling alters mitochondrial morphology, function, and mass *Scientific Reports* 2021-11-11 [PMID: 34764359] (Immunocytochemistry/ Immunofluorescence, Rat)
- Ishimura E, Nakagawa T, Moriwaki K et al. Augmented O-GlcNAcylation of AMP-activated kinase promotes the proliferation of LoVo cells, a colon cancer cell line. *Cancer Sci.* 2017-10-03 [PMID: 28973823] (WB, Human)
- Greenspan NS, Dacek DA, Cooper LJ. Cooperative binding of two antibodies to independent antigens by an Fc-dependent mechanism. *FASEB J.* 1989-08-01 [PMID: 2666233]
- Greenspan NS, Dacek DA, Cooper LJ. Fc region-dependence of IgG3 anti-streptococcal group A carbohydrate antibody functional affinity. I. The effect of temperature. *J Immunol.* 1988-12-15 [PMID: 3058803]
- Greenspan NS, Monafo WJ, Davie JM. Interaction of IgG3 anti-streptococcal group A carbohydrate (GAC) antibody with streptococcal group A vaccine: enhancing and inhibiting effects of anti-GAC, anti-isotypic, and anti-idiotypic antibodies. *J Immunol.* 1987-01-01 [PMID: 2431057]
- Akimoto Y, Kreppel LK, Hirano H, Hart GW. Localization of the O-linked N-acetylglucosamine transferase in rat pancreas. *Diabetes.* 1999-12-01 [PMID: 10580430] (ICC/IF, Rat)
- Turner JR, Tartakoff AM, Greenspan NS. Cytologic assessment of nuclear and cytoplasmic O-linked N-acetylglucosamine distribution by using anti-streptococcal monoclonal antibodies. *Proc Natl Acad Sci USA.* 1990-08-01 [PMID: 2116002] (ICC/IF, Rat)
- Yagi H, Nakagawa N, Saito T et al. AGO61-dependent GlcNAc modification primes the formation of functional glycans on alpha-dystroglycan. *Sci Rep.* 2013-11-21 [PMID: 24256719] (WB, Primate)
- Love DC, Ghosh S, Mondoux MA et al. Dynamic O-GlcNAc cycling at promoters of *Caenorhabditis elegans* genes regulating longevity, stress, and immunity. *Proc Natl Acad Sci U S A.* 2010-04-01 [PMID: 20368426]
- Hamiel CR, Pinto S, Hau A et al. Glutamine enhances heat shock protein 70 expression via increased hexosamine biosynthetic pathway activity. *Am J Physiol Cell Physiol.* 2009-12-01 [PMID: 19776393]
- Zhang X, Bennett V. Identification of O-linked N-acetylglucosamine modification of ankyrinG isoforms targeted to nodes of Ranvier. *J Biol Chem.* 1996-12-01 [PMID: 8940148]



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### Products Related to NB300-614

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-96978	Mouse IgG3 Kappa Light Chain Isotype Control (MG3K)

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### Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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