Product Datasheet

MUC2 Antibody (996/1) - BSA Free
NB120-11197

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

Reviews: 1 Publications: 12

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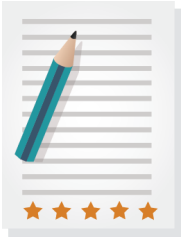
Updated 10/23/2024 v.20.1



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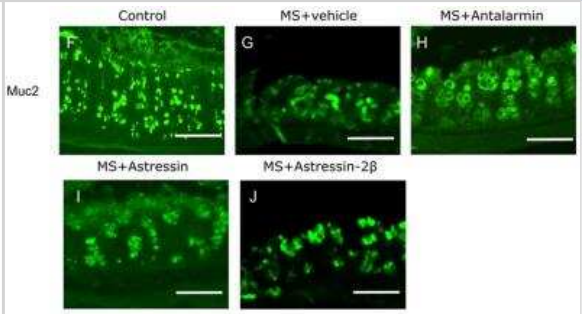
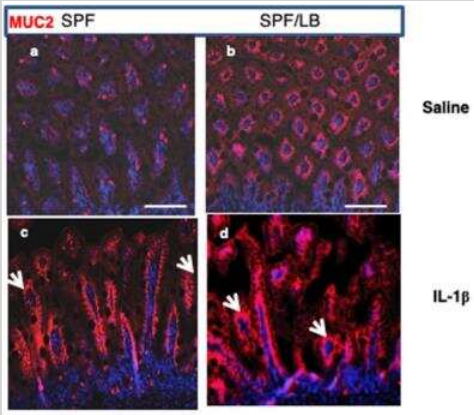
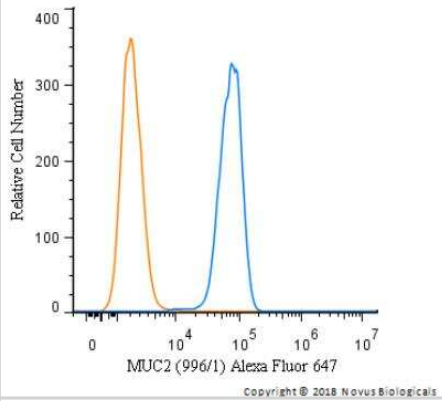
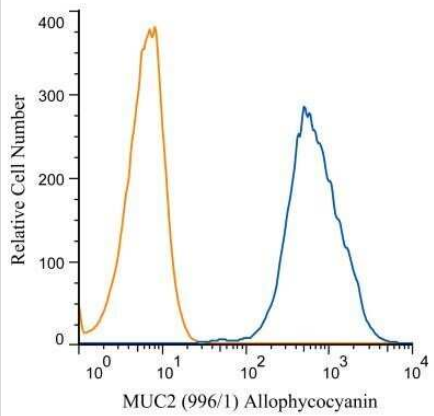
MUC2 Antibody (996/1) - BSA Free

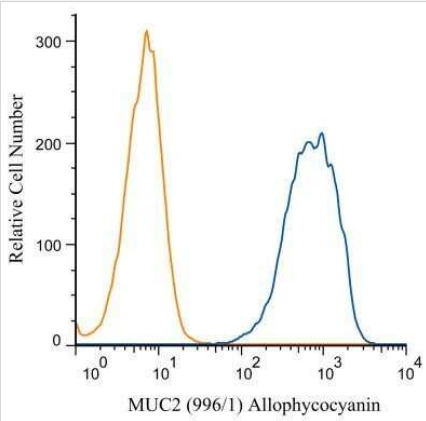
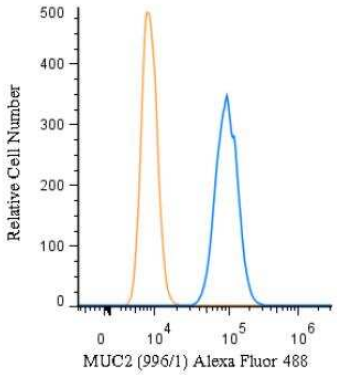
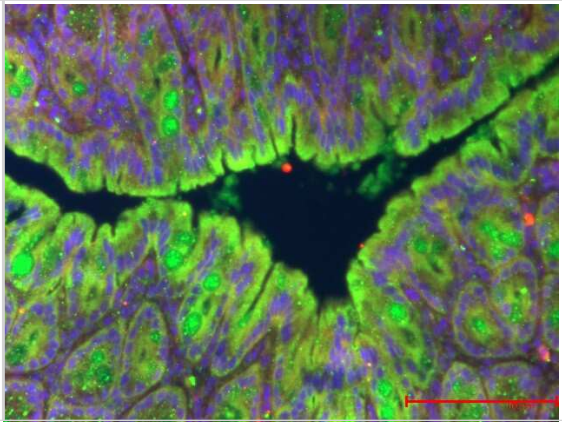
Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	996/1
Preservative	0.02% Sodium Azide
Isotype	IgG1
Purity	Protein A or G purified
Buffer	PBS
Target Molecular Weight	540 kDa

Product Description	
Host	Mouse
Gene ID	4583
Gene Symbol	MUC2
Species	Human, Mouse
Reactivity Notes	Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any questions. Mouse reactivity reported in scientific literature (PMID: 24045942).
Specificity/Sensitivity	MUC2 Antibody (996/1) recognizes the human MUC2 mucin, and shows no cross-reactivity with MUC1, MUC3 or MUC4 mucins. In tissue sections colon, liver and prostate stain strongly. It recognizes malignant colonic mucosa and normal mucosa.
Immunogen	This MUC2 Antibody (996/1) was developed against MUC2 tandem repeat peptide

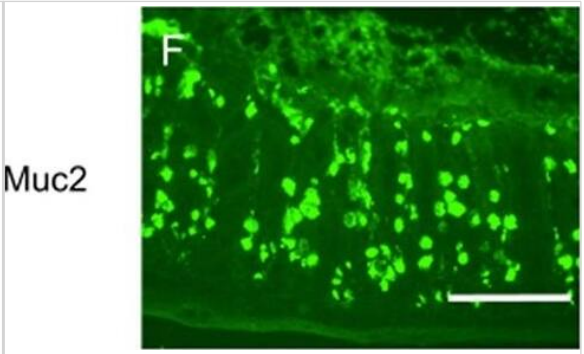
Product Application Details	
Applications	Western Blot, Flow Cytometry, Flow (Intracellular), Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:100-1:2000, Flow Cytometry 1:10-1:1000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin 1:10-1:500, Immunohistochemistry-Frozen 1:10-1:500, Flow (Intracellular)
Application Notes	Membrane permeabilization is required for Flow Cytometry.

Images

Immunohistochemistry: MUC2 Antibody (996/1) [NB120-11197] - Immunofluorescence of Mucin 2 (Muc2; mucous-forming protein) (F-J) in proximal colon in all experimental groups. Histological scores were highest in MS, demonstrated injury in MS compared to control. Treatment with Antalarmin and Astressin prevented this MS-induced colonic injury, but not by Astressin-2B. Image collected and cropped by CiteAb from the following publication (nature.com/articles/srep46616), licensed under a CC-BY license.	
Immunohistochemistry: MUC2 Antibody (996/1) [NB120-11197] - Maternal LB modulates IL-1B-induced goblet cell Tff3 and MUC2 response to inflammatory stress in pre-weaned mice. a,b) Immunofluorescence detection of MUC2 molecules (red) in the mouse goblet cells in SPF (a) vs SPF/LB pups (b). Representative areas (n = 3 per group) are shown Bar 100 uM, magnification 400x. c,d) Representative areas of MUC2 exclusion from goblet cells in response to IL-1B stimulation in SPF (c) or SPF/LB (d) pups are shown; magnification 400x. Image collected and cropped by CiteAb from the following publication (https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0237182), licensed under a CC-BY license.	
Flow Cytometry: MUC2 Antibody (996/1) [NB120-11197] - An intracellular stain was performed on HeLa cells with MUC2 Antibody [996/1] NB120-11197AF647 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.	
Flow Cytometry: MUC2 Antibody (996/1) [NB120-11197] - Analysis of Allophycocyanin conjugate of NB120-11197. An intracellular stain was performed on HeLa cells with MUC2 (996/1) antibody NB120-11197APC (blue) and a matched isotype control NBP2-27287APC (orange). Cells were fixed with 4% PFA and then permeabli	

Flow Cytometry: MUC2 Antibody (996/1) [NB120-11197] - Analysis of Allophycocyanin conjugate of NB120-11197. An intracellular stain was performed on NTERA-2 cells with MUC2 (996/1) antibody NB120-11197APC (blue) and a matched isotype control NBP2-27287APC (orange). Cells were fixed with 4% PFA and then permea	
Flow (Intracellular): MUC2 Antibody (996/1) [NB120-11197] - An intracellular stain was performed on HeLa cells with MUC2 Antibody (996/1) NB120-11197AF488 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 488.	
Immunohistochemistry-Paraffin: Mouse Monoclonal MUC2 Antibody (996/1) [NB120-11197] - Staining of mouse colon tissue using MUC2 Antibody. Colon, MUC2 -Green, DAPI-Blue. Antibody dilution - 1:100. Image from a verified customer review.	

Immunocytochemistry/ Immunofluorescence: MUC2 Antibody (996/1) - BSA Free [NB120-11197] - MS-induced intestinal epithelium injury was CRHR1 dependent.Photomicrographs of hematoxylin & eosin (H&E) stained (A–E) & immunofluorescence of Mucin 2 (Muc2; mucous-forming protein) (F–J) in proximal colon in all experimental groups. Histological scores (K) were highest in MS, demonstrated injury in MS compared to control. Treatment with Antalarmin & Astressin prevented this MS-induced colonic injury, but not by Astressin-2β. Crypt length in μm (L) (red lines in photomicrographs A–E) & the number of Muc2+ goblet cells per crypt (M) were reduced by MS compared to control, & restored to control levels following Antalarmin & Astressin treatment. Astressin-2β did not prevent these MS-induced effects. Myeloperoxidase (MPO; μmol/mg protein) expression was increased in MS group & was reduced to a level similar to control by treatment with Antalarmin but not by treatment with Astressin or Astressin-2β (N). Western blot analysis of NF-κB showed an increase in the phosphorylated expression of NF-κB in MS, which was prevented by Antalarmin administration, but not by Astressin or Astressin-2β (O,P). Trans-cellular flux of HRP (ng/ml.cm2.min; Q) measured by Ussing Chamber was increased in MS & MS + Astressin-2β groups, compared to control, but not in MS + Antalarmin & MS + Astressin groups (P). Results are means, ±SD. $p < 0.05$ was considered significant. Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/srep46616), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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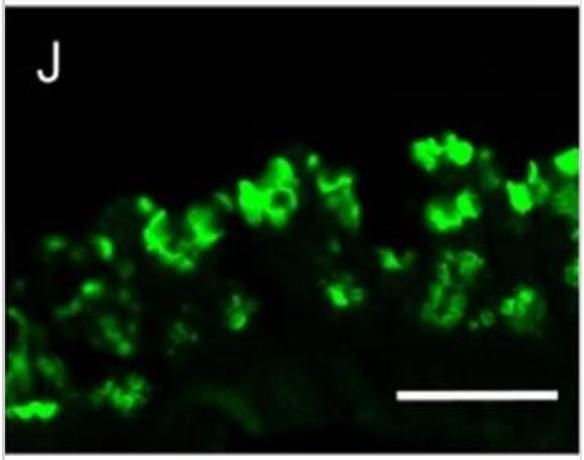

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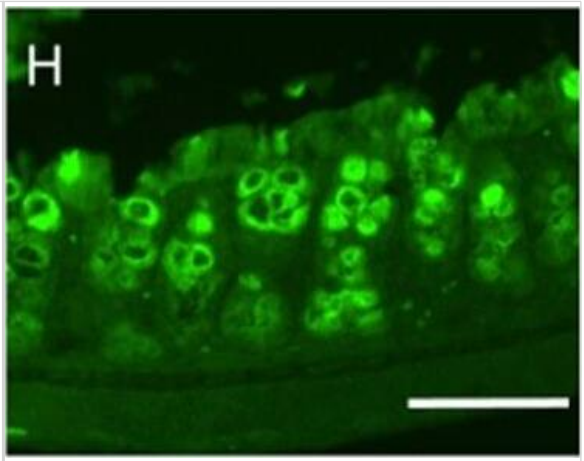

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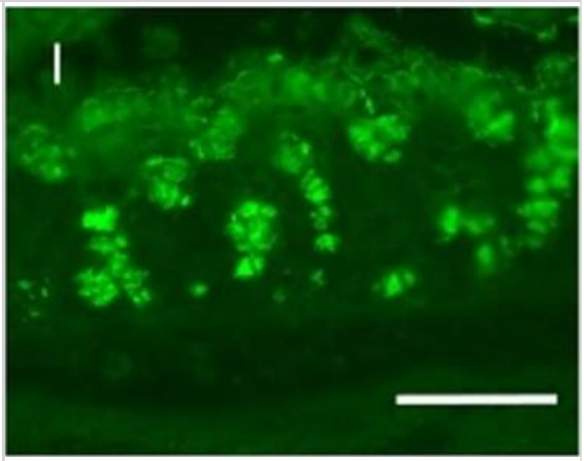

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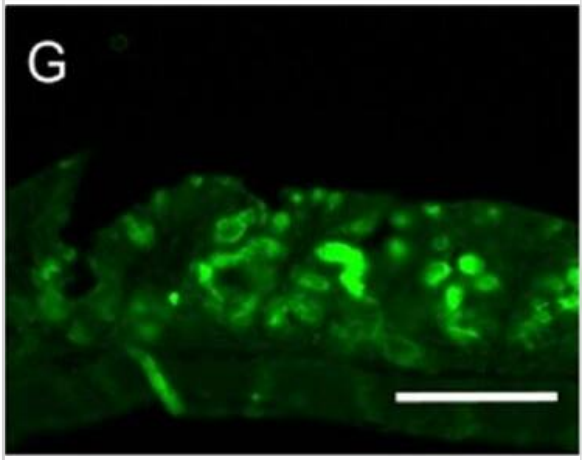

Publications

Capdevila C, Miller J, Cheng L, Kornberg A et Al. Time-resolved fate mapping identifies the intestinal upper crypt zone as an origin of Lgr5+ crypt base columnar cells Cell 2024-06-07 [PMID: 38848677]

Xie Z, Li M, Qian M et al. Co-Cultures of Lactobacillus acidophilus and Bacillus subtilis Enhance Mucosal Barrier by Modulating Gut Microbiota-Derived Short-Chain Fatty Acids Nutrients 2022-10-25 [PMID: 36364738] (Western Blot)

Wanner N, Barnhart J, Apostolakis N Et al. Using the Autofluorescence Finder on the Sony ID7000(TM) Spectral Cell Analyzer to Identify and Unmix Multiple Highly Autofluorescent Murine Lung Populations Front Bioeng Biotechnol 2022-04-04 [PMID: 35372303] (FLOW, Mouse)

Details:
Citation using the Alexa Fluor 532 version of this antibody.

Bao L, Cui X, Wang X et al. Carbon Nanotubes Promote the Development of Intestinal Organoids through Regulating Extracellular Matrix Viscoelasticity and Intracellular Energy Metabolism ACS Nano 2021-10-26 [PMID: 34622660]

Details:
Citation using the PE format of this antibody.

Talbot S, Doyle B, et al. Vagal sensory neurons drive mucous cell metaplasia. J Allergy Clin Immunol 2020-06-01 [PMID: 31954778] (FLOW, Mouse)

Xu P, Xi Y, Zhu J et al. Intestinal Sulfation Is Essential to Protect Against Colitis and Colonic Carcinogenesis Gastroenterology 2021-04-02 [PMID: 33819483] (IF/IHC, Mouse)

Yang KS, Ciprani D, O'Shea A et al. EXTRACELLULAR VESICLE ANALYSIS ALLOWS FOR IDENTIFICATION OF INVASIVE IPMN Gastroenterology 2020-12-07 [PMID: 33301777] (Human)

Wu H, Chen QY, Wang WZ et al. Compound sophorae decoction enhances intestinal barrier function of dextran sodium sulfate induced colitis via regulating notch signaling pathway in mice Biomed Pharmacother 2020-11-17 [PMID: 33217689] (WB, Mouse)

Li B, Lee C et al. Inhibition of corticotropin-releasing hormone receptor 1 and activation of receptor 2 protect against colonic injury and promote epithelium repair. Sci Rep 2017-11-05 [PMID: 31748698] (IF/IHC, Mouse)

Yu Y, Lu J, Oliphant K et al. Maternal administration of probiotics promotes gut development in mouse offsprings PLoS ONE 2020-08-07 [PMID: 32764797] (Mouse)

Li B, Lee C, Filler T, Hock A Inhibition of corticotropin-releasing hormone receptor 1 and activation of receptor 2 protect against colonic injury and promote epithelium repair Sci Rep. 2017-05-10 [PMID: 28492284] (IF/IHC, Mouse)

Mishra J, Verma RK, Alpini G et al. Role of janus kinase 3 in mucosal differentiation and predisposition to colitis. J Biol Chem. 2013-11-01 [PMID: 24045942] (IHC-Fr, Mouse)

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Products Related to NB120-11197

NB820-59205	Human Colon Whole Tissue Lysate (Adult Whole Normal)
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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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