Product Datasheet

MUC4 Antibody
NBP1-52193

Unit Size: 0.1 ml

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

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Reviews: 1 Publications: 3

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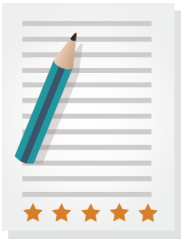
Updated 11/12/2023 v.20.1



NBP1-52193

MUC4 Antibody

Product Information

Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

Product Description

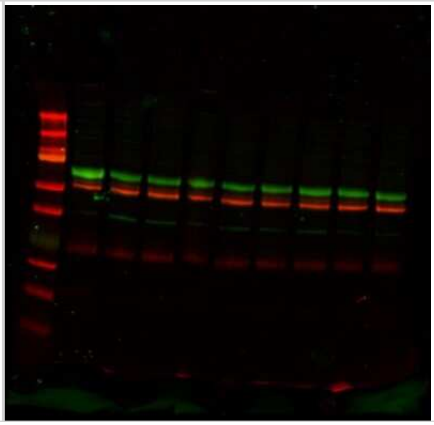
Host	Rabbit
Gene ID	4585
Gene Symbol	MUC4
Species	Human, Mouse
Specificity/Sensitivity	This antibody is specific for the beta chain of MUC4.
Immunogen	A partial recombinant protein made to an internal region of the human MUC4 protein beta chain(within residues 5150-5300). [Swiss-Prot Q99102]
Notes	Manufactured by Genomic Antibody Technology™. GAT FAQs

Product Application Details

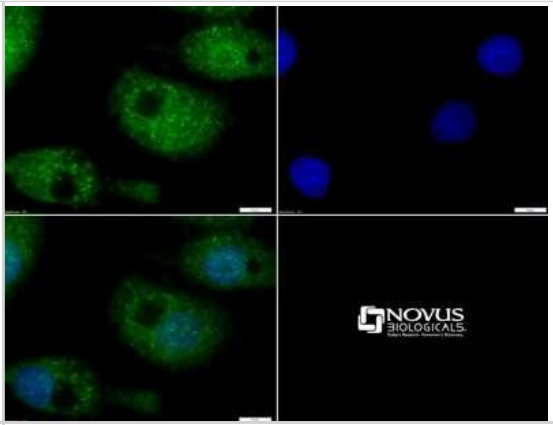
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot, Simple Western 1:500, Immunohistochemistry 1:400, Immunocytochemistry/ Immunofluorescence 1:250, Immunohistochemistry-Paraffin 1:400
Application Notes	In Western blot bands are seen ~78 kDa representing MUC4 beta and ~50 kDa. The identity of the 50 kDa band is unknown. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. Does not work for IP as per customer feedback. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.

Images

Western Blot: MUC4 Antibody [NBP1-52193] - MUC4 is shown in the green channel, with beta-tubulin in red channel and Precision Plus dual color protein ladder in the left. The main band is about 60 kDa, with another band about 40 kDa. Image from verified customer review.

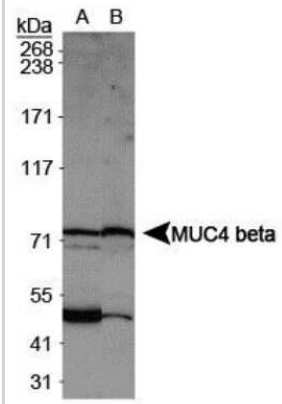


Immunocytochemistry/Immunofluorescence: MUC4 Antibody [NBP1-52193] - Staining of MUC4 in HepG2 cells with FITC (green). Nuclei were counterstained with DAPI (blue).



Immunohistochemistry: MUC4 Antibody [NBP1-52193] - Staining of MUC4 in mouse prostate

Western Blot: MUC4 Antibody [NBP1-52193] - Analysis of MUC4 beta in MCF7 whole cell extract (A) and HeLa whole cell extract (B).



Simple Western: MUC4 Antibody [NBP1-52193] - Image shows a specific band for MUC4 in 1.0 mg/mL of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.

Publications

Oosterlinck B, Ceuleers H, Arras W et al. Mucin-microbiome signatures shape the tumor microenvironment in gastric cancer Microbiome 2023-04-21 [PMID: 37085819] (IHC-P, Human)

Zhou X, Kinlough CL, Hughey RP et al. Sialylation of MUC4b N-glycans by ST6GAL1 orchestrates human airway epithelial cell differentiation associated with Type-2 inflammation JCI Insight 2019-02-07 [PMID: 30730306] (WB, Human)

Milara J, Morell A, Ballester B et al. MUC4 impairs the anti-inflammatory effects of corticosteroids in chronic rhinosinusitis with nasal polyps J. Allergy Clin. Immunol. 2016-09-14 [PMID: 27639937] (ICC/IF, Human)

Procedures

Western Blot protocol for MUC4 Antibody (NBP1-52193)
MUC4 Antibody:
Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions.

*Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

Immunohistochemistry-Paraffin protocol for MUC4 Antibody (NBP1-52193)
MUC4 Antibody:
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes.

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

Immunocytochemistry/Immunofluorescence protocol for MUC4 Antibody (NBP1-52193)
MUC4 Antibody:
Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,0000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Limitations
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