

## Anti-MUC2 Antibody Picoband™

Catalog Number: A01212

### About MUC2

Mucin 2, also known as MUC2, is a protein that in humans is encoded by the MUC2 gene. This gene encodes a member of the mucin protein family. It is mapped to 11p15.5. Mucin 2 is particularly prominent in the gut where it is secreted from goblet cells in the epithelial lining into the lumen of the large intestine. There, mucin 2, along with small amounts of related-mucin proteins, polymerizes into a gel of which 80% by weight is oligosaccharide side-chains that are added as post-translational modifications to the mucin proteins. This gel provides an insoluble mucous barrier that serves to protect the intestinal epithelium. The primary function of the MUC2 gene product is to provide a protective barrier between the epithelial surfaces and the gut lumen. There is decreased expression of MUC2 in colonic cancer and defective polymerization of secreted mucin in ulcerative colitis.

### Overview

Product Name	Anti-MUC2 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-MUC2 Antibody Picoband™ catalog # A01212. Tested in IF, IHC applications. This antibody reacts with Human, Mouse, Rat.
Application	IF, IHC
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q02817

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human MUC2, which shares 86.1% amino acid (aa) sequence identity with both mouse and rat MUC2.
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat</p> <p>Immunofluorescence, 5ug/ml, Human, Mouse</p>

## Anti-MUC2 Antibody Picoband™ (A01212) Images

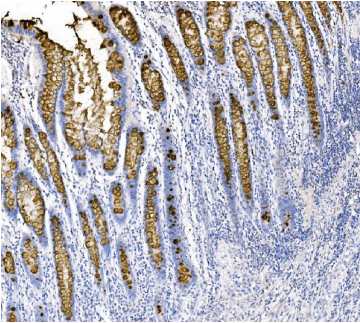


Figure 1. IHC analysis of MUC2 using anti-MUC2 antibody (A01212). MUC2 was detected in a paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

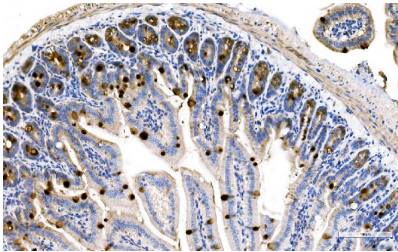


Figure 2. IHC analysis of MUC2 using anti-MUC2 antibody (A01212). MUC2 was detected in a paraffin-embedded section of mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

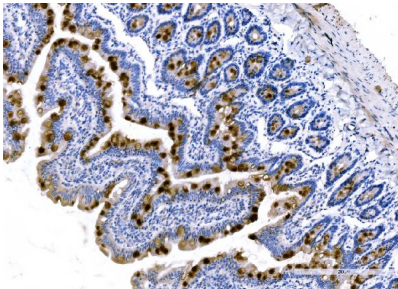


Figure 3. IHC analysis of MUC2 using anti-MUC2 antibody (A01212). MUC2 was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

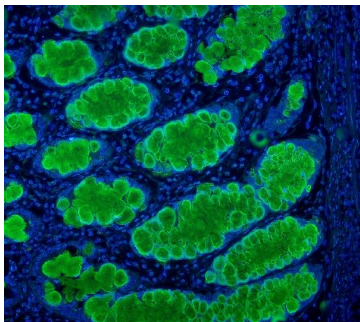


Figure 4. IF analysis of MUC2 using anti-MUC2 antibody (A01212). MUC2 was detected in paraffin-embedded section of human intestine cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

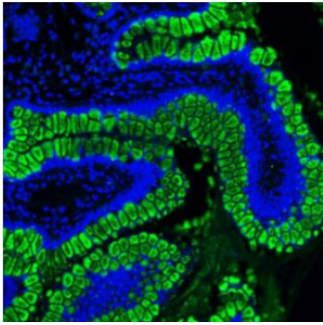


Figure 5. IF analysis of MUC2 using anti-MUC2 antibody (A01212).

MUC2 was detected in paraffin-embedded section of human ileum tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

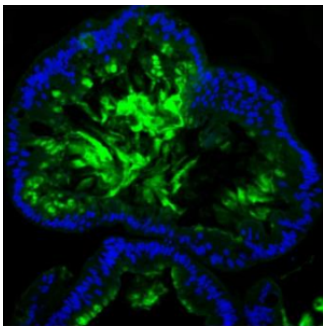


Figure 6. IF analysis of MUC2 using anti-MUC2 antibody (A01212).

MUC2 was detected in paraffin-embedded section of human colon organoid tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

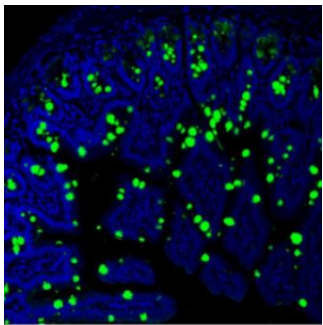


Figure 7. IF analysis of MUC2 using anti-MUC2 antibody (A01212).

MUC2 was detected in paraffin-embedded section of mouse ileum tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

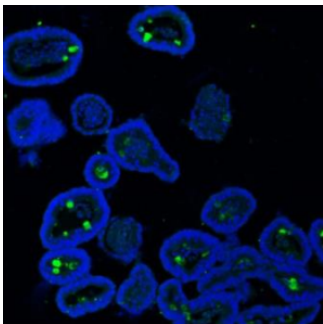


Figure 8. IF analysis of MUC2 using anti-MUC2 antibody (A01212).

MUC2 was detected in paraffin-embedded section of mouse ileum organoid tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

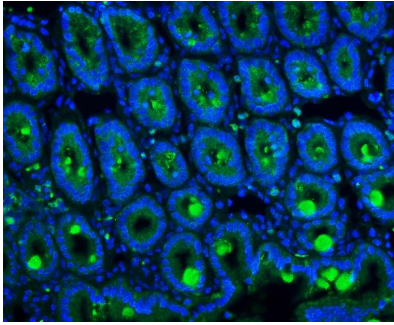


Figure 9. IF analysis of MUC2 using anti-MUC2 antibody (A01212). MUC2 was detected in paraffin-embedded section of mouse intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-MUC2 Antibody (A01212) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

### 3 Publications Citing This Product

1. PubMed ID: 10.1016/j.envpol.2019.07.021, Subchronic exposure of environmentally relevant concentrations of F-53B in mice resulted in gut barrier dysfunction and colonic inflammation in a sex-independent manner
2. PubMed ID: 10.1016/j.scitotenv.2021.148775, Maternal exposure to sodium rho-perfluorooctanesulfonate during pregnancy and lactation disrupts intestinal barrier and may cause obstacles to the nutrient transport and metabolism in F0 and F1 generations of mice
3. PubMed ID: 10.1016/j.jff.2020.104045, Bifidobacterium breve ATCC15700 pretreatment prevents alcoholic liver disease through modulating gut microbiota in mice exposed to chronic alcohol intake

Visit [bosterbio.com/anti-muc2-antibody-a01212-boster.html](https://bosterbio.com/anti-muc2-antibody-a01212-boster.html) to see all 3 publications.

### Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



Anti-MUC2 Antibody <sup>™</sup>