

**Anti-MUC2 Rabbit Monoclonal Antibody**  
Catalog # ABO13534**Specification****Anti-MUC2 Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	<a href="#">Q02817</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

**Description**

Anti-MUC2 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

**Anti-MUC2 Rabbit Monoclonal Antibody - Additional Information**

**Gene ID** 4583

**Other Names**

Mucin-2, MUC-2, Intestinal mucin-2, MUC2 {ECO:0000303|PubMed:8300571, ECO:0000312|HGNC:HGNC:7512}

**Calculated MW**

540300 MW KDa

**Application Details**

WB 1:500-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>IP 1:50<br>FC 1:50

**Subcellular Localization**

Secreted. In the intestine, secreted into the inner and outer mucus layers..

**Tissue Specificity**

Colon, small intestine, colonic tumors, bronchus, cervix and gall bladder.

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human MUC2

**Purification**

Affinity-chromatography

**Storage**

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated**

## freeze-thaw cycles.

### Anti-MUC2 Rabbit Monoclonal Antibody - Protein Information

**Name** MUC2 {ECO:0000303|PubMed:8300571, ECO:0000312|HGNC:HGNC:7512}

#### Function

Coats the epithelia of the intestines and other mucus membrane-containing organs to provide a protective, lubricating barrier against particles and infectious agents at mucosal surfaces (PubMed:<a href="http://www.uniprot.org/citations/17058067" target="\_blank">17058067</a>, PubMed:<a href="http://www.uniprot.org/citations/19432394" target="\_blank">19432394</a>, PubMed:<a href="http://www.uniprot.org/citations/33031746" target="\_blank">33031746</a>). Major constituent of the colon mucus, which is mainly formed by large polymeric networks of MUC2 secreted by goblet cells that cover the exposed surfaces of intestine (PubMed:<a href="http://www.uniprot.org/citations/19432394" target="\_blank">19432394</a>, PubMed:<a href="http://www.uniprot.org/citations/33031746" target="\_blank">33031746</a>). MUC2 networks form hydrogels that guard the underlying epithelium from pathogens and other hazardous matter entering from the outside world, while permitting nutrient absorption and gas exchange (PubMed:<a href="http://www.uniprot.org/citations/33031746" target="\_blank">33031746</a>, PubMed:<a href="http://www.uniprot.org/citations/36206754" target="\_blank">36206754</a>). Acts as a divalent copper chaperone that protects intestinal cells from copper toxicity and facilitates nutritional copper uptake into cells (PubMed:<a href="http://www.uniprot.org/citations/36206754" target="\_blank">36206754</a>). Binds both Cu(2+) and its reduced form, Cu(1+), at two juxtaposed binding sites: Cu(2+), once reduced to Cu(1+) by vitamin C (ascorbate) or other dietary antioxidants, transits to the other binding site (PubMed:<a href="http://www.uniprot.org/citations/36206754" target="\_blank">36206754</a>). MUC2-bound Cu(1+) is protected from oxidation in aerobic environments, and can be released for nutritional delivery to cells (PubMed:<a href="http://www.uniprot.org/citations/36206754" target="\_blank">36206754</a>). Mucin gels store antimicrobial molecules that participate in innate immunity (PubMed:<a href="http://www.uniprot.org/citations/33031746" target="\_blank">33031746</a>). Mucin glycoproteins also house and feed the microbiome, lubricate tissue surfaces, and may facilitate the removal of contaminants and waste products from the body (PubMed:<a href="http://www.uniprot.org/citations/33031746" target="\_blank">33031746</a>). Goblet cells synthesize two forms of MUC2 mucin that differ in branched chain O-glycosylation and the site of production in the colon: a (1) 'thick' mucus that wraps the microbiota to form fecal pellets is produced in the proximal, ascending colon (By similarity). 'Thick' mucus transits along the descending colon and is lubricated by a (2) 'thin' MUC2 mucus produced in the distal colon which adheres to the 'thick' mucus (By similarity).

#### Cellular Location

Secreted. Note=In the intestine, secreted into the inner and outer mucus layers (By similarity). Before secretion, mucin polymers are stored in dedicated secretory vesicles (PubMed:33031746). {ECO:0000250|UniProtKB:Q80Z19, ECO:0000269|PubMed:33031746}

#### Tissue Location

Colon, small intestine, colonic tumors, bronchus, cervix and gall bladder.

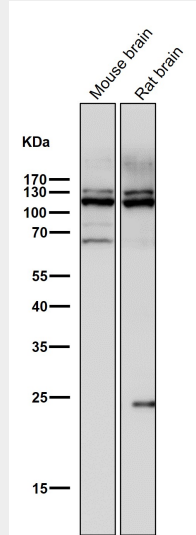
### Anti-MUC2 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

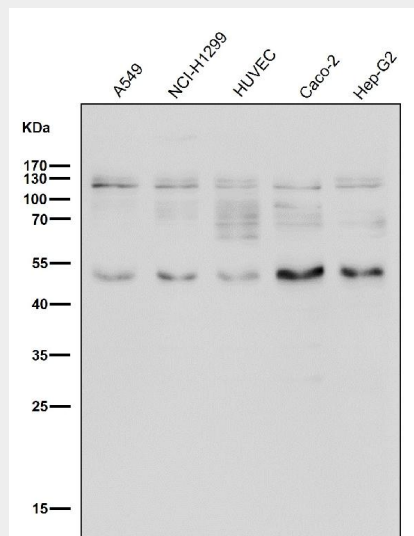
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

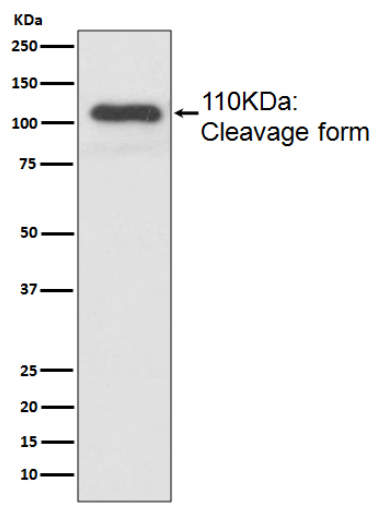
### Anti-MUC2 Rabbit Monoclonal Antibody - Images



All lanes use the Antibody at 1:2K dilution for 1 hour at room temperature.



All lanes use the Antibody at 1:2K dilution for 1 hour at room temperature.



Western blot analysis of MUC2 expression in Caco-2 cell lysate.