Anti-MUC2 antibody ab90007

Overview

Product name
Anti-MUC2 antibody

Description
Rabbit polyclonal to MUC2

Host species
Rabbit

Tested applications
Suitable for: IHC-P, ICC/IF

Species reactivity
Reacts with: Human
Predicted to work with: Mouse, Rat

Immunogen
Synthetic peptide within Human MUC2 aa 350-450 conjugated to keyhole limpet haemocyanin.
The exact sequence is proprietary.
Database link: Q02817
(Peptide available as ab103274)

Positive control
This antibody gave a positive signal in human colon tissue sections.

Properties

Form
Liquid

Storage instructions
Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

Storage buffer
Preservative: 0.02% Sodium Azide
Constituents: 1% BSA, PBS, pH 7.4

Purity
Immunogen affinity purified

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab90007 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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<th><strong>Application</strong></th>
<th><strong>Abreviews</strong></th>
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<td>IHC-P</td>
<td></td>
<td>Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
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<tr>
<td>ICC/IF</td>
<td>★ ⭐ ⭐ ⭐</td>
<td>Use a concentration of 5 µg/ml.</td>
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**Target**

**Function**
Coats the epithelia of the intestines, airways, and other mucus membrane-containing organs. Thought to provide a protective, lubricating barrier against particles and infectious agents at mucosal surfaces. Major constituent of both the inner and outer mucus layers of the colon and may play a role in excluding bacteria from the inner mucus layer.

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

**Sequence similarities**
Contains 1 CTCK (C-terminal cystine knot-like) domain.
Contains 1 TIL (trypsin inhibitory-like) domain.
Contains 2 VWFC domains.
Contains 4 VWFD domains.

**Post-translational modifications**
O-glycosylated.
May undergo proteolytic cleavage in the outer mucus layer of the colon, contributing to the expanded volume and loose nature of this layer which allows for bacterial colonization in contrast to the inner mucus layer which is dense and devoid of bacteria.
At low pH of 6 and under, undergoes autocatalytic cleavage in vitro in the N-terminal region of the fourth VWD domain. It is likely that this also occurs in vivo and is triggered by the low pH of the late secretory pathway.

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

**Images**

IHC image of MUC2 staining in human normal colon FFPE section, performed on a BondTM system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab90007, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MUC2 antibody (ab90007)
ICC/IF image of ab90007 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab90007, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. This antibody also gave a positive result in 4% PFA fixed (10 min) Hek293, HepG2 and MCF7 cells at 5µg/ml.

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