abcam

# Product datasheet

# Anti-MUC1 antibody [MH1 ; same as CT2] ab80952

2 References 1 图像

## 概述

| | |
|---|---|
| **产品名称** | Anti-MUC1抗体[MH1 ; same as CT2] |
| **描述** | 亚美尼亚仓鼠单克隆抗体[MH1 ; same as CT2] to MUC1 |
| **宿主** | Armenian hamster |
| **经测试应用** | **适用于:** WB, IP, IHC-P, Flow Cyt, ICC/IF |
| **种属反应性** | **与反应:** Mouse, Human<br>**预测可用于:** Rat, Rabbit, Guinea pig |
| **免疫原** | A synthetic peptide corresponding to aa 239-255 (<br>SSLSYTNPAVAATSANL<br>) form the cytoplasmic tail of human MUC1.<br>Run BLAST with Run BLAST with |
| **表位** | Amino acids 239-255 |
| **阳性对照** | MCF-7 cells. Breast carcinoma. |
| **常规说明** | This antibody is raised in Armenian Hamster (NOT Syrian Hamster) hence, it is advised to use an appropriate secondary antibody.<br>Abcam is committed to meeting high standards of ethical manufacturing and has decided to discontinue this product by June 2019 as it has been generated by the ascites method. We are sorry for any inconvenience this may cause. We would recommend antibody ab45167 as a replacement. |

## 性能

| | |
|---|---|
| **形式** | Liquid |
| **存放说明** | Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. |
| **存储溶液** | Preservative: None<br>Constituents: 10mM PBS, pH 7.4 |
| **纯度** | Protein G purified |
| **克隆** | 单克隆 |
| **克隆编号** | MH1 ; same as CT2 |
| **同种型** | IgG |

## 应用

Our Abpromise guarantee covers the use of **ab80952** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| 应用 | Ab评论 | 说明 |
|---|---|---|
| WB | | |
| IP | | |
| IHC-P | | |
| Flow Cyt | | |
| ICC/IF | | |

**应用说明**

Flow Cyt: Use at an assay dependent dilution.
ICC/IF: Use at an assay dependent dilution.
IHC-P: Use at a concentration of 1 - 2 µg/ml for 30 min at RT.
Note: no specia pretreatement required.
IP: Use at an assay dependent dilution.
WB: Use at an assay dependent dilution. Predicted molecular weight: 122 kDa.

Not yet tested in other applications.
Optimal dilutions/concentrations should be determined by the end user.

## 靶标

**功能**

The alpha subunit has cell adhesive properties. Can act both as an adhesion and an anti-adhesion protein. May provide a protective layer on epithelial cells against bacterial and enzyme attack.
The beta subunit contains a C-terminal domain which is involved in cell signaling, through phosphorylations and protein-protein interactions. Modulates signaling in ERK, SRC and NF-kappa-B pathways. In activated T-cells, influences directly or indirectly the Ras/MAPK pathway. Promotes tumor progression. Regulates TP53-mediated transcription and determines cell fate in the genotoxic stress response. Binds, together with KLF4, the PE21 promoter element of TP53 and represses TP53 activity.

**组织特异性**

Expressed on the apical surface of epithelial cells, especially of airway passages, breast and uterus. Also expressed in activated and unactivated T-cells. Overexpressed in epithelial tumors, such as breast or ovarian cancer and also in non-epithelial tumor cells. Isoform Y is expressed in tumor cells only.

**疾病相关**

MUC1/CA 15-3 is used as a serological clinical marker of breast cancer to monitor response to breast cancer treatment and disease recurrence (PubMed:20816948). Decreased levels over time may be indicative of a positive response to treatment. Conversely, increased levels may indicate disease progression. At an early stage disease, only 21% of patients exhibit high MUC1/CA 15-3 levels, that is why CA 15-3 is not a useful screening test. Most antibodies target the highly immunodominant core peptide domain of 20 amino acid

(APDTRPAPGSTAPPAHGVTS) tandem repeats. Some antibodies recognize glycosylated epitopes.
Medullary cystic kidney disease 1

**序列相似性**

Contains 1 SEA domain.

**发展阶段**

During fetal development, expressed at low levels in the colonic epithelium from 13 weeks of gestation.

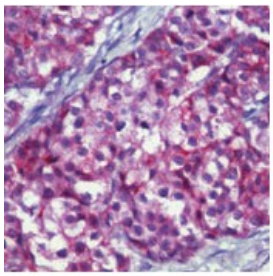
**翻译后修饰**

Highly glycosylated (N- and O-linked carbohydrates and sialic acid). O-glycosylated to a varying degree on serine and threonine residues within each tandem repeat, ranging from mono- to penta-glycosylation. The average density ranges from about 50% in human milk to over 90% in T47D breast cancer cells. Further sialylation occurs during recycling. Membrane-shed glycoproteins from kidney and breast cancer cells have preferentially sialyated core 1 structures, while secreted forms from the same tissues display mainly core 2 structures. The O-glycosylated content is overlapping in both these tissues with terminal fucose and galactose, 2- and 3-linked galactose, 3- and 3,6-linked GalNAc-ol and 4-linked GlcNAc predominating. Differentially O-glycosylated in breast carcinomas with 3,4-linked GlcNAc. N-glycosylation consists of high-mannose, acidic complex-type and hybrid glycans in the secreted form MUC1/SEC, and neutral complex-type in the transmembrane form, MUC1/TM.
Proteolytic cleavage in the SEA domain occurs in the endoplasmic reticulum by an autoproteolytic mechanism and requires the full-length SEA domain as well as requiring a Ser, Thr or Cys residue at the P + 1 site. Cleavage at this site also occurs on isoform MUC1/X but not on isoform MUC1/Y. Ectodomain shedding is mediated by ADAM17.
Dual palmitoylation on cysteine residues in the CQC motif is required for recycling from endosomes back to the plasma membrane.
Phosphorylated on tyrosines and serine residues in the C-terminal. Phosphorylation on tyrosines in the C-terminal increases the nuclear location of MUC1 and beta-catenin. Phosphorylation by PKC delta induces binding of MUC1 to beta-catenin/CTNNB1 and thus decreases the formation of the beta-catenin/E-cadherin complex. Src-mediated phosphorylation inhibits interaction with GSK3B. Src- and EGFR-mediated phosphorylation on Tyr-1229 increases binding to beta-catenin/CTNNB1. GSK3B-mediated phosphorylation on Ser-1227 decreases this interaction but restores the formation of the beta-cadherin/E-cadherin complex. On T-cell receptor activation, phosphorylated by LCK. PDGFR-mediated phosphorylation increases nuclear colocalization of MUC1CT and CTNNB1.
The N-terminal sequence has been shown to begin at position 24 or 28.

**细胞定位**

Secreted; Cell membrane. Cytoplasm. Nucleus. On EGF and PDGFRB stimulation, transported to the nucleus through interaction with CTNNB1, a process which is stimulated by phosphorylation. On HRG stimulation, colocalizes with JUP/gamma-catenin at the nucleus and Apical cell membrane. Exclusively located in the apical domain of the plasma membrane of highly polarized epithelial cells. After endocytosis, internalized and recycled to the cell membrane. Located to microvilli and to the tips of long filopodial protusions.

## 图片



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MUC1 antibody [MH1 ; same as CT2] (ab80952)

Formalin-fixed, paraffin-embedded human breast cancer stained with anti MUC1 antibody using alkaline phosphatase-conjugate and fast red chromogen. Note nuclear and cytoplasmic staining of tumor cells.



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