

Datasheet for ABIN7072292

Recombinant anti-MUC1 antibody



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2 Images

Overview

Quantity:	200 µg
Target:	MUC1
Reactivity:	Human
Host:	Rabbit
Antibody Type:	Recombinant Antibody
Clonality:	Chimeric
Conjugate:	This MUC1 antibody is un-conjugated
Application:	Immunohistochemistry (IHC), Western Blotting (WB), ELISA, Immunoprecipitation (IP), Immunoradiometric Assay (IRMA)

Product Details

Purpose:	Anti-MUC1 [Mc5], Rabbit IgG, kappa
Immunogen:	Human breast epithelial mucin.
Clone:	Mc5
Isotype:	IgG kappa
Specificity:	This antibody is specific for the amino acid sequence DTRPAP of MUC1. The alpha subunit of MUC1 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 of MUC-1 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.

Product Details

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.

Characteristics: Original Species of Ab: Mouse
Original Format of Ab: IgG2

Purification: Protein A affinity purified

Target Details

Target: MUC1

Alternative Name: MUC1 ([MUC1 Products](#))

Background: CD227, BEM, Breast epithelial mucin, Mucin-1, Breast carcinoma-associated antigen DF3, Cancer antigen 15-3, CA 15-3, Carcinoma-associated mucin, Episialin, H23AG, Krebs von den Lungen-6, KL-6, PEMT, Peanut-reactive urinary mucin, PUM, Polymorphic epithelial mucin, PEM, Tumor-associated epithelial membrane antigen, EMA, Tumor-associated mucin

UniProt: [P15941](#)

Pathways: [Negative Regulation of intrinsic apoptotic Signaling](#)

Application Details

Application Notes: In an attempt to develop a reliable way to detect breast cancer, immunoprecipitation was performed on NPGP from HMFG using the mouse version of this antibody bound to Sepharose 4B. Furthermore, this antibody was tested in an radioimmunoassay experiment on NPGP using the mouse version of this antibody (Ceriani et al, 1992, pmid:1377884). The epitope of this antibody was mapped by ELISA using small peptides - the murine version of this antibody was used (Petrakou et al, 1998, pmid:9422085). This antibody was used to identify cells expressing the MUC1 protein. This was accomplished by using the mouse version of this antibody on cell lysates of cell transfected with the MUC1 protein in a western blot analysis (Rubinstein et al, 2006, pmid:17145869). To compare the diagnostic usefulness of different antibodies, the mouse version of this antibody was used for immunohistochemistry on cell pellets from pleural fluid specimens (Creaney et al, 2008, pmid:18454162). While developing an antibody against the alpha/beta junction of MUC1 the mouse version of this antibody was used for western blot on the MUC1 protein (Rubinstein et al, 2008, pmid:18821582). While assessing a panel of 56 anti MUC1 antibodies for their ability to detect cancer the mouse version of this antibody was used for an immunoradiometric assay on a serum made from sera from 10 different patients with

Application Details

	breast, ovarian or colon cancer (Norum et al, 1998, pmid:9422099). To more accurately determine the epitope of this antibody, an ELISA was preformed using the murine version of this antibody on different small pepetides from the MUC1 protein (Karsten et al, 2004, pmid:15115750).
Comment:	This chimeric rabbit antibody was made using the variable domain sequences of the original Mouse IgG2 format, for improved compatibility with existing reagents, assays and techniques.
Restrictions:	For Research Use only

Handling

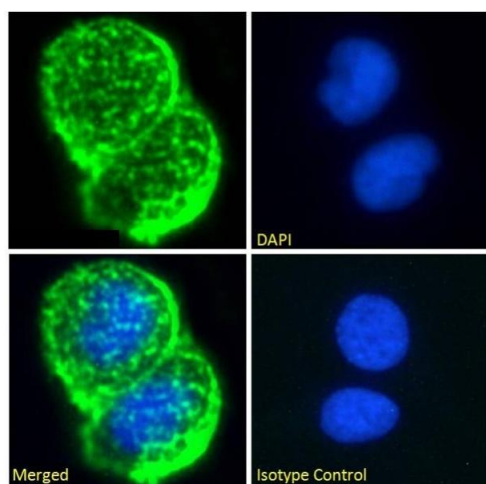
Concentration:	1 mg/mL
Buffer:	PBS with 0.02 % Proclin 300.
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Images



Western Blotting

Image 1. Western Blot using anti-breast epithelial mucin antibody Mc5. MCF7 cell lysate (35 µg protein in RIPA buffer) was resolved on a 10 % SDS PAGE gel and blots probed with the chimeric rabbit IgG version of Mc5 (ABIN7072292) at 2 µg/mL before detection using an anti-rabbit secondary antibody. A primary incubation of 1h was used and protein was detected by chemiluminescence. The expected running size for unmodified breast epithelial mucin is 122.1 kDa, but this protein is heavily glycosylated and lipidated at several positions leading to the observed running size.



Immunofluorescence

Image 2. Immunofluorescence staining of fixed MCF7 cells with anti-Breast epithelial mucin antibody Mc5. Immunofluorescence analysis of paraformaldehyde fixed MCF7 cells permeabilized with 0.15 % Triton and stained with the chimeric mouse IgG1 version of Mc5 (ABIN7072292) at 10 µg/mL for 1h followed by Alexa Fluor®488 secondary antibody (2 µg/mL), showing membrane staining. The nuclear stain is DAPI (blue). Panels show from left-right, top-bottom ABIN7072292, DAPI, merged channels and an isotype control. The isotype control was stained with an anti-unknown specificity antibody followed by Alexa Fluor®488 secondary antibody.