Mucin-1 (MUC1) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Mucin-1 (MUC1), Polyclonal Antibody
Full Product Name	Rabbit anti-human Mucin-1 polyclonal Antibody, FITC
Product Gene Name	anti-MUC1 antibody
Product Synonym Names	PUM; Breast carcinoma-associated antigen DF3 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-associa
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Purity/Purification	Caprylic Acid Ammonium Sulfate Precipitation Purified
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C or -80 degree C. Avoid repeated freeze.
Matching Pairs	Unconjugated Antibody: MUC1 (MBS1489018) FITC Conjugated Antibody: MUC1 (MBS1491200)
Molecular Weight	28,297 Da
OMIM	113720
3D Structure	ModBase 3D Structure for P15941
Storage Buffer	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, PH 7.4
Conjugate	FITC
Santa Cruz Alternative	Potential replacement for Santa Cruz Biotechnology antibody catalog# sc-6827 / sc-6825 / sc-52089 / sc-52092 / sc-52093 / sc-15333
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-MUC1 antibody	ELISA (EIA)
Related Product Information for anti-MUC1 antibody	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. Ref.26 Ref.37 Ref.40 Ref.45 Ref.46 Ref.49 Ref.52 Ref.53 Ref.56.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.
Other Notes	Small volumes of anti-MUC1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MUC1 purchase	MBS1491200 is an antibody targeting MUC1. Also known as Rabbit anti-human Mucin-1 polyclonal Antibody, FITC. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MUC1. It may not necessarily be applicable to this product.

NCBI GI #	67189007
NCBI GeneID	4582
NCBI Accession #	NP_001018016.1
UniProt Primary Accession #	P15941
UniProt Secondary Accession #	P13931; P15942; P17626; A5YRV1; A6ZID9; A6ZIE0; B1AVQ8; B1AVR0; B6ECA1; E7ESE5; E7EUG9
UniProt Related Accession #	P15941
GenBank Nucleotide #	NM_001018016.2
NCBI Official Full Name	mucin-1 isoform 2
NCBI Official Synonym Full Names	mucin 1, cell surface associated
NCBI Official Symbol	MUC1
NCBI Official Synonym Symbols	EMA; MCD; PEM; PUM; KL-6; MAM6; MCKD; PEMT; CD227; H23AG; MCKD1; MUC-1; ADMCKD; ADMCKD1; CA 15-3; MUC-1/X; MUC1/ZD; MUC-1/SEC
UniProt Protein Name	Mucin-1
UniProt Synonym Protein Names	Breast carcinoma-associated antigen DF3; Cancer antigen 15-3; CA 15-3
Protein Family	Mucin
UniProt Gene Name	MUC1
UniProt Synonym Gene Names	PUM; MUC-1; CA 15-3; KL-6; PUM; PEM; EMA; MUC1-NT; MUC1-alpha; MUC1-beta
UniProt Entry Name	MUC1_HUMAN
NCBI Protein Information	mucin-1
NCBI Summary for MUC1	This gene encodes a membrane-bound protein that is a member of the mucin family. Mucins are O-glycosylated proteins that play an essential role in forming protective mucous barriers on epithelial surfaces. These proteins also play a role in intracellular signaling. This protein is expressed on the apical surface of epithelial cells that line the mucosal surfaces of many different tissues including lung, breast stomach and pancreas. This protein is proteolytically cleaved into alpha and beta subunits that form a heterodimeric complex. The N-terminal alpha subunit functions in cell-adhesion and the C-terminal beta subunit is involved in cell signaling. Overexpression, aberrant intracellular localization, and changes in glycosylation of this protein have been associated with carcinomas. This gene is known to contain a highly polymorphic variable number tandem repeats (VNTR) domain. Alternate splicing results in multiple transcript variants.[provided by RefSeq, Feb 2011]

UniProt Comments for MUC1	MUC1: a large cell surface glycoprotein expressed by most glandular and ductal epithelial cells and some hematopoietic cell lineages. Plays a role in adhesion and cell-cell interactions, metastasis and signaling. May provide a protective layer on epithelial surfaces. Direct or indirect interaction with actin cytoskeleton. Its cytoplasmic tail (MUC1CT) is involved in several signaling pathways, including those involving Ras, beta-catenin, p120 catenin, p53 and estrogen receptor alpha. MUC1CT also forms complexes with transcription factors, and then translocates to the nucleus by an unknown mechanism, where it is believed to influence the transcription of their target genes. MUC1CT has also been proposed to localize to mitochondrial membranes under conditions of genotoxic stress, where it attenuates the apoptotic pathway in response and confers resistance to apoptosis-inducing drugs. Aberrantly glycosylated forms expressed in human epithelial tumors, such as breast or ovarian cancer and also in non-epithelial tumor cells. Nine alternatively spliced isoforms have been described. Isoforms 5 and 9 are secreted. Isoform 7, expressed only in tumor cells, is a receptor and binds the secreted isoform 5. The binding induces the phosphorylation of the isoform 7, alters cellular morphology and initiates cell signaling. Can bind to GRB2 adapter protein. Protein type: Nuclear receptor co-regulator; Motility/polarity/chemotaxis; Tumor suppressor; Membrane protein, integral; Cell adhesion; Actin-binding Chromosomal Location of Human Ortholog: 1q21 Cellular Component: apical plasma membrane; extracellular space; Golgi lumen; integral to plasma membrane; nuclear chromatin; vesicle Molecular Function: p53 binding; protein binding; transcription cofactor activity Biological Process: cellular protein metabolic process; DNA damage response, signal transduction by p53 class mediator resulting in cell cycle arrest; DNA damage response, signal transduction by p53 class mediator resulting in transcription of p21 class mediator; negative regulation of cell adhesion mediated by integrin; O-glycan processing; post-translational protein modification; protein amino acid O-linked glycosylation; regulation of transcription from RNA polymerase II promoter in response to stress Disease: Medullary Cystic Kidney Disease 1
Research Articles on MUC1	**1.** These results support a model in which MUC1-C-induced TAK1short right arrowNF-kappaB signaling contributes to intestinal inflammation and colon cancer progression.
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