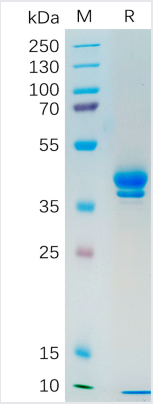
MUC1 Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	MUC1, Recombinant Protein
Full Product Name	Human MUC1 Protein, hFc Tag
Product Gene Name	MUC1 recombinant protein
Product Synonym Names	ADMCKD; ADMCKD1; CA 15-3; CD227; EMA; H23AG; KL-6; MAM6; MCD; MCKD; MCKD1; MUC-1; MUC-1/SEC; MUC-1/X; MUC1/ZD; PEM; PEMT; PUM
Sequence	MUC1 (Leu1036-V al1156) + hFc (Glu99-Ala 330)
Host	HEK293 cells
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose is added as protectants before lyophilization.
Purity/Purification	>95%. Affinity purification
Preparation and Storage	Store at -80 degree C for 12 months (Avoid repeated freezing and thawing)
Molecular Weight	122,102 Da
Chromosome Location	Chromosome: 1; NC_000001.10 (155158300..155162706, complement). Location: 1q21
OMIM	113720
3D Structure	ModBase 3D Structure for P15941
Origin	Human
Reconstitution	Reconstitute with deionized water
Tag	C-Human Fc tag
Related Product Information for MUC1 recombinant protein	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.
Other Notes	Small volumes of MUC1 recombinant protein 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	MBS188295 is a recombinant protein targeting MUC1. Also known as Human MUC1 Protein, hFc Tag. Host: HEK293 cells.



SDS-Page of MUC1 recombinant protein

Figure 1. Human MUC1 Protein, hFc Tag on SDS-PAGE under reducing condition.

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; Q0VAP6; Q14128; Q14876; Q16437; Q16442; Q16615; B1AVQ8; B1AVR0
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; PEM; PUM; KL-6; MAM6; PEMT; CD227; H23AG; MUC-1; 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; 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; CD_antigen: CD227Cleaved into the following 2 chains:Mucin-1 subunit alpha; MUC1-NT; MUC1-alpha; Mucin-1 subunit beta; MUC1-betaAlternative name(s):MUC1-CT
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; episialin; DF3 antigen; H23 antigen; cancer antigen 15-3; krebs von den Lungen-6; mucin 1, transmembrane; tumor-associated mucin; carcinoma-associated mucin; polymorphic epithelial mucin; peanut-reactive urinary mucin; tumor associated epithelial

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: Motility/polarity/chemotaxis; Membrane protein, integral; Nuclear receptor co-regulator; Tumor suppressor; Cell adhesion; Actin-binding Chromosomal Location of Human Ortholog: 1q21 Cellular Component: extracellular space; cell surface; integral to plasma membrane; Golgi lumen; apical plasma membrane; nuclear chromatin; cytoplasm; vesicle Molecular Function: protein binding; p53 binding; transcription cofactor activity Biological Process: protein amino acid O-linked glycosylation; DNA damage response, signal transduction by p53 class mediator resulting in transcription of p21 class mediator; regulation of transcription from RNA polymerase II promoter in response to stress; cellular protein metabolic process; O-glycan processing; post-translational protein modification; DNA damage response, signal transduction by p53 class mediator resulting in cell cycle arrest Disease: Medullary Cystic Kidney Disease 1
Research Articles on MUC1	**1.** High serum CA 15-3 level is associated with breast cancer.
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