Mucin 1 (MUC1) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Mucin 1 (MUC1), ELISA Kit
Full Product Name	Human Mucin 1 (MUC1) Mini Samples ELISA Kit
Product Gene Name	MUC1 elisa kit
Product Synonym Names	CD227; EMA; H23AG; KL-6; PEM; PEMT; PUM; CA15-3; Cancer antigen 15-3; Carcinoma-associated mucin; Episialin; Peanut-reactive urinary mucin; Polymorphic epithelial mucin
Species Reactivity	Human
Assay Type	Double-antibody Sandwich ELISA for Antigen Detection
Samples	Tissue homogenates, cell lysates, cell culture supernates and other biological fluids
Detection Range	0.625-40ng/mL
Sensitivity	0.266ng/mL
Molecular Weight	28,297 Da
OMIM	J05582 mRNA
3D Structure	ModBase 3D Structure for P15941
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Product Categories/Family for MUC1 elisa kit	Tumor immunity; Infection immunity; Pulmonology
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Related Product Information for MUC1 elisa kit	MBS2087362 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Mucin 1 (MUC1) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing MUC1. The ELISA analytical biochemical technique of the MBS2087362 kit is based on MUC1 antibody-MUC1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect MUC1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, MUC1. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of MUC1 elisa kit 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.

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
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: Actin-binding; Cell adhesion; Membrane protein, integral; Motility/polarity/chemotaxis; Nuclear receptor co-regulator; Tumor suppressor Chromosomal Location of Human Ortholog: 1q22 Cellular Component: extracellular space; Golgi lumen; integral to plasma membrane; nuclear chromatin; vesicle Molecular Function: p53 binding; protein binding; transcription cofactor activity Biological 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; regulation of transcription from RNA polymerase II promoter in response to stress Disease: Medullary Cystic Kidney Disease 1

Research Articles on MUC1	**1.** it seems reasonable to further evaluate the prognostic value of circulating tumor cells and CA27.29 as a combined prognostic test of two potentially independent markers that might provide complementary prognostic information.
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