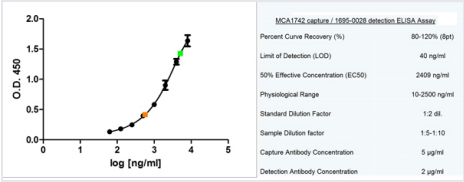
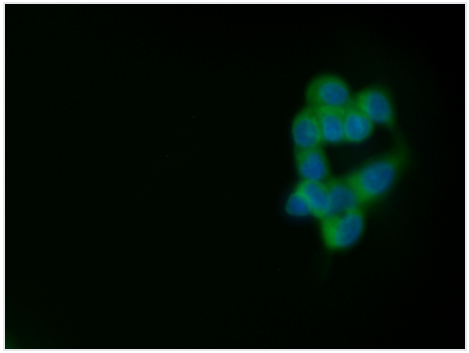
CD227 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

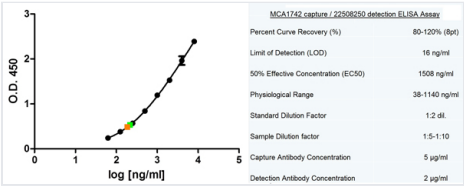
Product Name	CD227, Monoclonal Antibody
Full Product Name	MOUSE ANTI HUMAN CD227
Product Gene Name	anti-CD227 antibody
Clonality	Monoclonal
Isotype	IgG3
Clone Number	C595 (NCRC48)
Host	Mouse
Form/Format	Purified Purified IgG - liquid
Concentration	IgG concentration 1.0 mg/ml (lot specific)
Preparation and Storage	Store at 4 degree C or at -20 degree C if preferred. This product should be stored undiluted. Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use. Shelf Life: 18 months from date of despatch.
Molecular Weight	28,297 Da
OMIM	113720
3D Structure	ModBase 3D Structure for P15941
Perservative Stabilisers	0.09% Sodium Azide Preparation||Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Histology Positive Control Tissue	Breast carcinoma Buffer Solution||Phosphate buffered saline
Target Species	Human
Applications Tested/Suitable for anti-CD227 antibody	Immunohistology Frozen, ELISA (EIA), Flow cytometry (FC/FACS), Immunofluorescence (IF), Immunohistology Paraffin*, Western Blot (WB)
Application Notes for anti-CD227 antibody	**ELISA:** Minimum Dilution: 1/100; Maximum Dilution: 1/1000; **Immunohistology - Paraffin:** Application Note: **This product requires heat mediated antigen retrieval prior to staining of paraffin embedded material. Citrate buffer pH6.0 is recommended for this purpose.**
Related Product Information for anti-CD227 antibody	Mouse anti Human CD227 antibody, clone C595 (NCRC48) recognizes CD227, also known as mucin 1 which is a breast cancer associated mucin encoded by the Muc-1 gene. Mucins are a family of high molecular weight, heavily glycosylated proteins (glycoconjugates) produced by many epithelial tissues in vertebrates. CD227 is expressed on most secretory epithelium, including mammary gland and some hematopoietic cells. This protein is overexpressed abundantly in >90% breast carcinomas and metastases. Mouse anti Human CD227 antibody, clone C595 recognizes the peptide epitope ARG-PRO-ALA-PRO within the protein core of the mucin.
Other Notes	Small volumes of anti-CD227 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 CD227 purchase	MBS212292 is an antibody targeting CD227. Also known as MOUSE ANTI HUMAN CD227. Host: Mouse.



Testing Data of anti-CD227 antibody
Sandwich ELISA analysis of CD227 expression using Mouse anti Human CD227, clone C595 as a capture reagent and biotinylated Mouse anti Human CD227, clone VU-4H5 (MBS211488) as a detection reagent with purified breast cancer antigen as antigen for the generation of the standard curve. Detection is by HRP conjugated streptavidin and substrate. Microtitre plate is read at O.D. 450 nm on the iMark Microplate Absorbance Reader . Plasma and serum samples diluted 1:5 are indicated in green and orange respectively



Testing Data of anti-CD227 antibody
Immunofluorescence staining of MCF-7 cells with Mouse anti Human CD227:FITC (MBS210761) (green), nuclei are counterstained with DAPI (blue)



Testing Data of anti-CD227 antibody
Sandwich ELISA analysis of CD227 expression using Mouse anti Human CD227, clone C595 as a capture reagent and biotinylated Mouse anti Human CD227, clone 6A4 as a detection reagent with purified breast cancer antigen as antigen for the generation of the standard curve. Detection is by HRP conjugated streptavidin and substrate. Microtitre plate is read at O.D. 450 nm on the iMark Microplate Absorbance Reader. Plasma and serum samples diluted 1:5 are indicated in green and orange respectively

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD227. 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; 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; DF3 antigen; H23 antigen; Medullary cystic kidney disease, autosomal dominant; breast carcinoma-associated antigen DF3; cancer antigen 15-3; carcinoma-associated mucin; episialin; krebs von den Lungen-6; mucin 1, transmembrane; peanut-reactive urinary mucin; polymorphic epithelial mucin; tumor associated epithelial mucin; tumor-associated epithelial membrane antigen
NCBI Summary for CD227	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 CD227	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; Motility/polarity/chemotaxis; Cell adhesion; Tumor suppressor; Membrane protein, integral; Nuclear receptor co-regulator Chromosomal Location of Human Ortholog: 1q21 Cellular Component: extracellular space; cell surface; integral to plasma membrane; Golgi lumen; cytoplasm; nuclear chromatin; apical plasma membrane; 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 CD227	**1.** High MUC1 expression is associated with breast cancer.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.

Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/monoclonal-antibody/cd227/212292