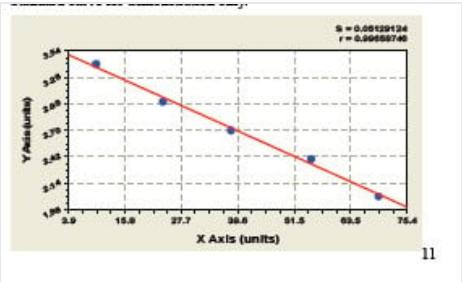
Cathepsin D (CTSD) ELISA Kit for Mouse

PRODUCT OVERVIEW

Product Name	Cathepsin D (CTSD), ELISA Kit
Full Product Name	Mouse Cathepsin D ELISA Kit
Product Gene Name	CTSD elisa kit
Species Reactivity	Mouse
Assay Type	Competitive
Samples	Serum, plasma, Cell Culture Supernatants, body fluid and tissue homogenate
Detection Range	100-2500pg/mL
Sensitivity	1.0pg/mL
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	44,552 Da
OMIM	gene 610127
3D Structure	ModBase 3D Structure for P07339
Sample Preparation	We suggest pre-experimenting with neat (undiluted) samples, 1:2 or 1:4 dilutions. Please avoid diluting your samples more than 1:10 as it would exceed the dilution limit set for this kit. If the expected concentration of the target is beyond the detection range of the kit, please contact our technical support team
Intended Uses	This CTSD ELISA kit is a 1.5 hour solid-phase ELISA designed for the quantitative determination of Mouse CTSD. This ELISA kit for research use only, not for therapeutic applications!
Product Categories/Family for CTSD elisa kit	Neurobiology
ISO Certification	Manufactured in an ISO 13485:2016 Certified Laboratory.
Related Product Information for CTSD elisa kit	**Principle of the assay:** CTSD ELISA kit applies the competitive enzyme immunoassay technique utilizing a monoclonal anti-CTSD antibody and an CTSD-HRP conjugate. The assay sample and buffer are incubated together with CTSD-HRP conjugate in pre-coated plate for one hour. After the incubation period, the wells are decanted and washed five times. The wells are then incubated with a substrate for HRP enzyme. The product of the enzyme-substrate reaction forms a blue colored complex. Finally, a stop solution is added to stop the reaction, which will then turn the solution yellow. The intensity of color is measured spectrophotometrically at 450nm in a microplate reader. The intensity of the color is inversely proportional to the CTSD concentration since CTSD from samples and CTSD-HRP conjugate compete for the anti-CTSD antibody binding site. Since the number of sites is limited, as more sites are occupied by CTSD from the sample, fewer sites are left to bind CTSD-HRP conjugate. A standard curve is plotted relating the intensity of the color (O.D.) to the concentration of standards. The CTSD concentration in each sample is interpolated from this standard curve.
Other Notes	Small volumes of CTSD 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.

Searchable Terms for CTSD purchase	MBS723728 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cathepsin D (CTSD) 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 CTSD. The ELISA analytical biochemical technique of the MBS723728 kit is based on CTSD antibody-CTSD antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CTSD antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CTSD. 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(%). The family of cathepsin (s) are well known lysosomal aspartyl protease (s) activated by the low pH created by proton pumps. Mouse cathepsin D and the homologous gene product human cathepsin protein are frequently assayed as death markers in cancer research. Rapid, sensitive - to pg ml levels - and simple detection of cathepsin CTSD by a competitive ELISA kit for samples such as stem cell lysates or cell circulating proteins (exosomes) or cell culture supernatant, are possible with a unique combination of a rat monoclonal antibody clone (mAb) and rabbit polyclonal antibody pair; coupled with detection assay secondary antibodies. Other reagents for these CTSD ELISA kits are also included. Although not guaranteed, these products may show reactivity human antigens and may be used as a screen in correlative IHC services such as FISH probes detection. Cathepsin CTSD ELISA is available in flexible 48 or 96 test formats.



Typical Testing Data/Standard Curve (for reference only) of CTSD elisa kit

ADDITIONAL DETAILS

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

NCBI GI #	48146011
NCBI GeneID	1509
NCBI Accession #	CAG33228.1
UniProt Primary Accession #	P07339
UniProt Secondary Accession #	Q6IB57
UniProt Related Accession #	P07339
NCBI Official Full Name	CTSD
NCBI Official Synonym Full Names	cathepsin D
NCBI Official Symbol	CTSD
NCBI Official Synonym Symbols	CPSD; CLN10; HEL-S-130P
UniProt Protein Name	Cathepsin D
Protein Family	Aspartic-type endopeptidase
UniProt Gene Name	CTSD
UniProt Synonym Gene Names	CPSD
UniProt Entry Name	CATD_HUMAN
NCBI Protein Information	cathepsin D; lysosomal aspartyl protease; lysosomal aspartyl peptidase; ceroid-lipofuscinosis, neuronal 10; epididymis secretory sperm binding protein Li 130P

NCBI Summary for CTSD	This gene encodes a lysosomal aspartyl protease composed of a dimer of disulfide-linked heavy and light chains, both produced from a single protein precursor. This proteinase, which is a member of the peptidase C1 family, has a specificity similar to but narrower than that of pepsin A. Transcription of this gene is initiated from several sites, including one which is a start site for an estrogen-regulated transcript. Mutations in this gene are involved in the pathogenesis of several diseases, including breast cancer and possibly Alzheimer disease. [provided by RefSeq, Jul 2008]
UniProt Comments for CTSD	CTSD: Acid protease active in intracellular protein breakdown. Involved in the pathogenesis of several diseases such as breast cancer and possibly Alzheimer disease. Consists of a light chain and a heavy chain. Belongs to the peptidase A1 family. Protein type: Protease; EC 3.4.23.5; Motility/polarity/chemotaxis; Autophagy Chromosomal Location of Human Ortholog: 11p15.5 Cellular Component: extracellular matrix; lysosomal lumen; extracellular space; lysosome; melanosome; extracellular region Molecular Function: protein binding; aspartic-type endopeptidase activity Biological Process: collagen catabolic process; extracellular matrix disassembly; extracellular matrix organization and biogenesis; antigen processing and presentation of exogenous peptide antigen via MHC class II; proteolysis Disease: Ceroid Lipofuscinosis, Neuronal, 10
Research Articles on CTSD	**1.** Cathepsin D and B activities in the serum of patients with urothelial bladder cancer are directly proportional to disease severity and significantly higher compared with control group.
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