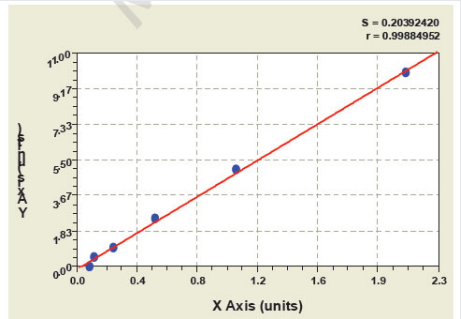
Cathepsin S (CATH S) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Cathepsin S (Cath S), ELISA Kit
Full Product Name	Human Cathepsin S ELISA Kit
Product Gene Name	Cath S elisa kit
Species Reactivity	Human
Assay Type	Competitive or Sandwich
Samples	Serum, plasma, Cell Culture Supernatants, body fluid and tissue homogenate
Detection Range	0.5-10ng/mL
Sensitivity	0.1ng/mL
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	31,626 Da
OMIM	116845
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 Cath-S ELISA kit is a 1.5 hour solid-phase ELISA designed for the quantitative determination of Human Cath-S. This ELISA kit for research use only, not for therapeutic applications!
Product Categories/Family for Cath S elisa kit	Immunology
ISO Certification	Manufactured in an ISO 13485:2016 Certified Laboratory.
Related Product Information for Cath S elisa kit	**Principle of the Assay:** Cath-S ELISA kit applies the quantitative sandwich enzyme immunoassay technique. The microtiter plate has been pre-coated with a monoclonal antibody specific for Cath-S. Standards or samples are then added to the microtiter plate wells and Cath-S if present, will bind to the antibody pre-coated wells. In order to quantitatively determine the amount of Cath-S present in the sample, a standardized preparation of horseradish peroxidase (HRP) -conjugated polyclonal antibody, specific for Cath-S are added to each well to "sandwich" the Cath-S immobilized on the plate. The microtiter plate undergoes incubation, and then the wells are thoroughly washed to remove all unbound components. Next, substrate solutions are added to each well. The enzyme (HRP) and substrate are allowed to react over a short incubation period. Only those wells that contain Cath-S and enzyme-conjugated antibody will exhibit a change in color. The enzyme-substrate reaction is terminated by addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm. A standard curve is plotted relating the intensity of the color (O.D.) to the concentration of standards. The Cath-S concentration in each sample is interpolated from this standard curve.
Other Notes	Small volumes of Cath S 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 Cath S purchase	MBS724201 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cathepsin S (Cath S) 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 Cath S. The ELISA analytical biochemical technique of the MBS724201 kit is based on Cath S antibody-Cath S antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect Cath S antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, Cath S. 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(%).



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

ADDITIONAL DETAILS

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

NCBI GI #	179957
NCBI GeneID	1520
NCBI Accession #	AAC37592.1
UniProt Secondary Accession #	Q5T5I0; Q6FHS5; Q9BUG3; B4DWC9; D3DV05
UniProt Related Accession #	P25774
NCBI Official Full Name	cathepsin S
NCBI Official Synonym Full Names	cathepsin S
NCBI Official Symbol	CTSS
UniProt Protein Name	Cathepsin S
Protein Family	Cathepsin
UniProt Gene Name	CTSS
UniProt Entry Name	CATS_HUMAN
NCBI Protein Information	cathepsin S
NCBI Summary for Cath S	The protein encoded by this gene, a member of the peptidase C1 family, is a lysosomal cysteine proteinase that may participate in the degradation of antigenic proteins to peptides for presentation on MHC class II molecules. The encoded protein can function as an elastase over a broad pH range in alveolar macrophages. Alternatively spliced transcript variants encoding distinct isoforms have been found for this gene. [provided by RefSeq, Dec 2010]

UniProt Comments for Cath S	CTSS: Thiol protease. Key protease responsible for the removal of the invariant chain from MHC class II molecules. The bond- specificity of this proteinase is in part similar to the specificities of cathepsin L and cathepsin N. Belongs to the peptidase C1 family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 3.4.22.27; Protease Chromosomal Location of Human Ortholog: 1q21 Cellular Component: lysosomal lumen; extracellular space; membrane; intracellular membrane-bound organelle; lysosome; extracellular region Molecular Function: collagen binding; proteoglycan binding; cysteine-type endopeptidase activity; fibronectin binding; laminin binding Biological Process: adaptive immune response; extracellular matrix organization and biogenesis; antigen processing and presentation of exogenous peptide antigen via MHC class I, TAP-independent; antigen processing and presentation of exogenous peptide antigen via MHC class II; proteolysis; extracellular matrix disassembly; antigen processing and presentation; collagen catabolic process; antigen processing and presentation of peptide antigen via MHC class I; proteolysis involved in cellular protein catabolic process; toll-like receptor signaling pathway; innate immune response; antigen processing and presentation of exogenous peptide antigen via MHC class I; immune response; positive regulation of inflammatory response
Research Articles on Cath S	**1.** Cat S-mediated autophagic flux is an important mechanism for inducing M2-type polarization of tumor-associated macrophages, which leads to tumor development
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