

Cathepsin D (CTSD) Active Protein | CTSD active protein

Active Cathepsin D (CTSD)

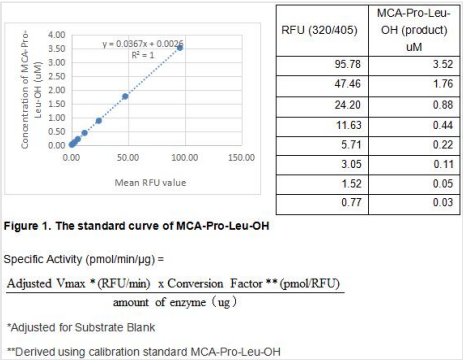
CATALOG # AAA161838	HOST 293F cell	APPLICATIONS Activity Assay, Cell Culture
-------------------------------	--------------------------	---

PRODUCT SYNONYMS

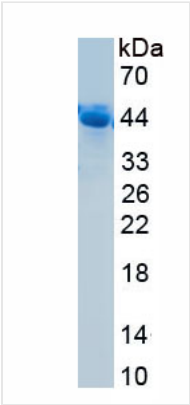
Cathepsin D (CTSD); Active Cathepsin D (CTSD); Cathepsin D; CTSD active protein (eukaryotic; 293F cell); Human; CPD; CLN10; Lysosomal Aspartyl Protease; Ceroid-Lipofuscinosis; Neuronal 104; CTSD active protein

PRODUCT SPECIFICATIONS

Host	293F cell
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Leu21~Leu4 12
Applicable Applications for CTSD active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Eukaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6.5
Research Area	Tumor immunity
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months



SDS-PAGE
Figure. SDS-PAGE



Bioactivity

Cathepsin D is a lysosomal aspartic protease of the pepsin family. Human cathepsin D is synthesized as a precursor protein, consisting of a signal peptide (residues 118), a propeptide (residues 1964), and a mature chain (residues 65412). The mature chain can be processed further to the light (residues 65161) and heavy (residues 169412) chains. It is expressed in most cells and overexpressed in breast cancer cells. It is a major enzyme in protein degradation in lysosomes, and also involved in the presentation of antigenic peptides. Mice deficient in this enzyme showed a progressive atrophy of the intestinal mucosa, a massive destruction of lymphoid organs, and a profound neuronal ceroid lipofucinosi, indicating that cathepsin D is essential for proteolysis of proteins regulating cell growth and tissue homeostasis. The activity of recombinant human CTSD is measured by its ability to cleave a fluorogenic peptide substrate MCA-Pro-Leu-Gly-Leu-DPA-Ala-Arg-NH2 in the assay buffer 0.1 M NaOAc, 0.2 M NaCl, pH 3.5. The rhCTSD is diluted to 20 ug/ml in assay buffer, then incubated at 37 degree C for 30min. The incubated rhCTSD is diluted to 5 ug/mL in assay buffer. Loading into a black well plate 50 uL of 5 ug/mL rhCTSD and start the reaction by adding 50 uL of 60 uM substrate, with a substrate blank containing 50 uL assay buffer, 50 uL substrate, and no rhCTSD. Then read at excitation and emission wavelengths of 320 nm and 405 nm, respectively, in kinetic mode for 5 minutes. The specific activity of recombinant human CTSD is > 675 pmol/min/ug.

ADDITIONAL INFORMATION

Product Categories/Family for CTSD active protein	Active proteins
---	-----------------

NCBI AND UNIPROT INFORMATION

NCBI GI #	4503143
NCBI GeneID	1509
NCBI Accession #	NP_001900.1
NCBI GenBank Nucleotide #	NM_001909.4
UniProt Accession #	P07339; Q6IB57
Molecular Weight	44,552 Da
NCBI Official Full Name	cathepsin D preproprotein
NCBI Official Synonym Full Names	cathepsin D
NCBI Official Symbol	CTSD
NCBI Official Synonym Symbols	CPSD; CLN10
NCBI Protein Information	cathepsin D; lysosomal aspartyl protease; lysosomal aspartyl peptidase; ceroid-lipofucinosi, neuronal 10
UniProt Protein Name	Cathepsin D
UniProt Gene Name	CTSD
UniProt Synonym Gene Names	CPSD

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/293f-cell-active-protein/cathepsin-d-ctsd/161838>