

## Recombinant Human CTSD, His-tagged, C13&N15 Labeled

**Cat. No.** CTSD-207H    **Lot. No.** (See product label)

### SPECIFICATION

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>     | Recombinant Human CTSD MS Standard Protein, C13 and N15-labeled (CTSD / Cathepsin D, Heavy Labeled) Ser 19 - Leu 412 (Accession # NP_001900) was produced in human 293 cells (HEK293) with fully chemically defined cell culture medium to obtain >99% incorpor                                                                                                                                                                                                                                                                                                            |
| <b>Species</b>              | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>               | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>        | 19-412 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description</b>          | Cathepsin D is also known as CTSD, CPSD, which belongs to the peptidase A1 family. Cathepsin D can be cleaved into the following 2 chains: cathepsin D light chain and cathepsin D heavy chain, which is expressed in the aorta extracellular space (at protein level). The catalytic activity of Cathepsin D is specificity similar to, but narrower than, that of pepsin A. Cathepsin D does not cleave the 4-Gln- -His-5 bond in B chain of insulin. Cathepsin D involved in the pathogenesis of several diseases such as breast cancer and possibly Alzheimer disease. |
| <b>Predicted N Terminal</b> | Ser 19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Form</b>                 | Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Molecular Mass</b>       | CTSD / Cathepsin D, Heavy Labeled is fused with a polyhistidine tag at the C-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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terminus, and has a calculated MW of 43.6 kDa. The predicted N-terminus is Ser 19. DTT-reduced Protein migrates as 45-55 kDa in SDS-PAGE due to glycosylation. CTSD / Cathepsin D,

**Endotoxin**

Less than 1.0 EU per µg of the CTSD / Cathepsin D, Heavy Labeled by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Applications**

MS Standard Protein

**Storage**

Avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: In lyophilized state for 1 year (4oC); After reconstitution under sterile conditions for 3 months (-70oC).

## GENE INFORMATION

**Gene Name**

CTSD cathepsin D [ Homo sapiens ]

**Official Symbol**

CTSD

**Synonyms**

CTSD; cathepsin D; cathepsin D (lysosomal aspartyl protease) , CPSD; ceroid lipofuscinosis; neuronal 10; CLN10; lysosomal aspartyl protease; lysosomal aspartyl peptidase; ceroid-lipofuscinosis, neuronal 10; CPSD; MGC2311;

**Gene ID**

1509

**mRNA Refseq**

NM\_001909

**Protein Refseq**

NP\_001900

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|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIM</b>                 | 116840                                                                                                                                                                                                                                                                                                              |
| <b>UniProt ID</b>          | P07339                                                                                                                                                                                                                                                                                                              |
| <b>Chromosome Location</b> | 11p15.5                                                                                                                                                                                                                                                                                                             |
| <b>Pathway</b>             | Ceramide signaling pathway, organism-specific biosystem; Direct p53 effectors, organism-specific biosystem; LKB1 signaling events, organism-specific biosystem; Lysosome, organism-specific biosystem; Lysosome, conserved biosystem; Tuberculosis, organism-specific biosystem; Tuberculosis, conserved biosystem; |
| <b>Function</b>            | aspartic-type endopeptidase activity; peptidase activity;                                                                                                                                                                                                                                                           |

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