## Recombinant Human Cathepsin D/CTSD Protein (His Tag)

## Catalog Number: PKSH030822

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description	
Species	Human
Source	HEK293 Cells-derived Human Cathepsin D/CTSD protein Met 1-Leu 412, with an C-
	terminal His
Calculated MW	44.0 kDa
Observed MW	40-110 kDa
Accession	P07339
Bio-activity	Measured by its ability to bind biotinylated human CTSS-His in a functional ELISA.
Properties	
Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80
	°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of
	reconstituted samples are stable at $< -20^{\circ}$ C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 25mM MES, 150mM NaCl, pH 6.5
	Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants
	before lyophilization.
	Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.
Data	
	KDa MK R
	116 —
	66.2
	45.0
	35.0

> 97 % as determined by reducing SDS-PAGE.

25.0

18.4 14.4

Background

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Cathepsin D (CTSD); a well known lysosomal aspartyl protease and belongs to the peptidase C1 family; which is a normal and major component of lysosomes; and is found in almost all cells and tissues of mammals. Its mostly described function is intracellular catabolism in lysosomal compartments; other physiological effect include hormone and antigen processing. Cathepsin D has a specificity similar to but narrower than that of pepsin A. Cathepsin D plays an important role in the degradation of proteins; the generation of bioactive proteins; antigen processing; etc. Among different role in cell physiology; a new function of this enzyme is examined. Cathepsin D is an important regulator of apoptotic pathways in cells. It acts at different stage of intrinsic and extrinsic pathway of apoptosis. In addition; CTSD secreted from human prostate carcinoma cells are responsible for the generation of angiostatin; a potent endogenous inhibitor of angiogenesis; suggesting its contribution to the prevention of tumor growth and angiogenesis-dependent growth of metastases.