Human Cathepsin K,cath-K ELISA Kit

Product Code	CSB-E09438h
Abbreviation	CTSK
Target Name	cathepsin K
Uniprot No.	P43235
Alias	RP11-363I22.4, CTS02, CTSO, CTSO1, CTSO2, MGC23107, PKND, PYCD, cathepsin O1|cathepsin O2|cathepsin X
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Sample Types	serum, plasma, tissue homogenates
Detection Range	7.8 pg/mL-500 pg/mL
Sensitivity	1.95 pg/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Signal Transduction
Gene Names	CTSK
Tag Info	quantitative
Protein Description	Sandwich
Description	This human CTSK ELISA kit employs the quantitative sandwich enzyme immunoassay technique to measure the levels of human CTSK in multiple samples, including serum, plasma, or tissue homogenates. The enzyme-substrate chromogenic reaction is also used to amplify the signal and quantify the levels of the analyte through the intensity of the colored product. The color intensity positively correlates with the amount of CTSK bound in the initial step. CTSK is a cysteine proteinase that is primarily expressed in osteoclasts and mainly functions to mediate bone resorption. CTSK cleaves key bone matrix proteins like type I collagen and plays an important role in degrading the organic phase of bone during bone resorption. Mutations in the CTSK gene lead to an autosomal recessive osteosclerotic skeletal disorder-pycnodysostosis. CTSK is involved in cartilage matrix degradation and osteoarthritis (OA) because it also degrades type II collagen, the predominant matrix protein of cartilage.
Target Details	This protein is a lysosomal cysteine proteinase involved in bone remodeling and resorption. This protein, which is a member of the peptidase C1 protein family, is

predominantly expressed in osteoclasts. However, the encoded protein is also expressed in a significant fraction of human breast cancers, where it could contribute to tumor invasiveness. Mutations in this gene are the cause of pycnodysostosis, an autosomal recessive disease characterized by osteosclerosis and short stature. This gene may be subject to RNA editing.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of human cath-K in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	97
	Range %	92-105
1:2	Average %	92
	Range %	88-98
1:4	Average %	85
	Range %	80-90
1:8	Average %	95
	Range %	91-100

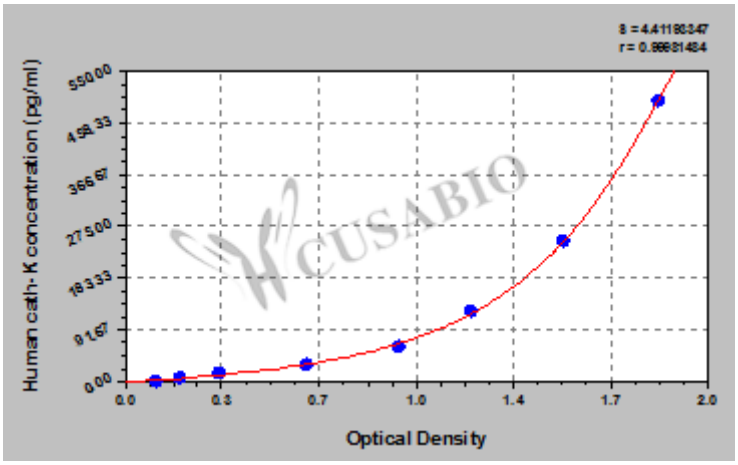
Recovery

The recovery of human cath-K spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	96	90-102
EDTA plasma (n=4)	95	88-99

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



pg/ml	OD1	OD2	Average	Corrected
500	1.886	1.822	1.854	1.735
250	1.568	1.489	1.529	1.410
125	1.213	1.201	1.207	1.088
62.5	0.976	0.939	0.958	0.839
31.2	0.652	0.624	0.638	0.519
15.6	0.348	0.325	0.337	0.218
7.8	0.206	0.199	0.203	0.084
0	0.121	0.117	0.119	?

Msds

{"0":{"fileurl":"https://www.cusabio.com/uploadfile/msds/MSDS CSB-E09438h.pdf","filename":"MSDS"}}