Recombinant CATK protein (His tag)

Catalog Number	539960
Synonyms	Cathepsin O; Cathepsin O2; Cathepsin X
Species	Human
Expression System	E. coli
Accession	P43235
Molecular Weight	Predictes a molecular mass of 25.15 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	115-329
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 115-329 aa (P43235) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Cathepsin K Fragment (aa 115-329) - A highly stable and soluble protein fragment ideal for structural studies and biochemical analysis of this key osteoclastic protease involved in bone remodeling and extracellular matrix degradation. Cathepsin K (EC 3.4.22.38) is a thiol protease that plays a critical role in osteoclastic bone resorption and participates in bone remodeling disorders. This enzyme demonstrates potent endoprotease activity against fibrinogen at acidic pH and contributes significantly to extracellular matrix degradation. Additionally, Cathepsin K is involved in thyroid hormone regulation through limited proteolysis of thyroglobulin to release thyroxine (T4). The protein localizes to lysosomes, is secreted, and also associates with the apical cell membrane as a peripheral membrane protein on the extracellular side, particularly within thyroid follicles and at the apical membrane of thyroid epithelial cells. The provided fragment (amino acids 115-329) represents a computationally selected stable domain suitable for research applications.