

Overview

Synonyms	Cathepsin B; APP secretase; APPS
Description	<p>Cathepsin B is an enzymatic protein that is a member of the peptidase (or protease) family. Elevated levels of cathepsin B occur in a wide variety of disease, causing numerous pathologies including cell death, inflammation, and the production of toxic peptides. For example, neuroscience research suggests that cathepsin B plays a role in inducing epilepsy resulting in a significant amount of cell death. Seizure-induced rats treated with a cathepsin B inhibitor exhibited improved neurological scores and learning ability with reduced neuronal cell death.</p> <p>Recombinant Human Cathepsin B produced in CHO cells is a polypeptide chain containing 332 amino acids. A fully biologically active molecule, rhCathepsin B has a molecular mass of 43 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.</p>
Accession No	P07858
Source	CHO
Biological Activity	<p>The Specific Activity is > 500 pmol/min/μg, measured by Cathepsin B's ability to cleave the fluorogenic peptide substrate Z-FR-AMC (Enzo, Catalog: P139).</p> <p>Activation Buffer: 25 mM MES, 5 mM DTT, pH 5.0</p> <p>Assay Buffer: 25 mM MES, pH 5.0</p> <p>Activate Cathepsin B: Dilute Cathepsin B to 10 μg/mL in Activation Buffer and incubate at room temperature for 15 minutes.</p> <p>Incubate 10 μM Z-FR-AMC and 0.2ng/μL activated Cathepsin B at room temperature for 5 minutes.</p> <p>Quantified by releasing the AMC which is detected by at excitation and emission wavelengths of 360 nm and 460 nm, respectively.</p>
Sequence	<pre>RSRPSFHPLS DELVNYVNKR NTTWQAGHNF YNVDMSYLKR LCGTFLGGPK PPQRVMFTED LKLPASFDAR EQWPQCPTIK EIRDQGSCGS CWAFGAVEAI SDRICHTNA HVSVEVSAED LLTCCGSMCG DGCNGGYPAE AWNFWTRKGL VSGGLYESHV GCRPYSIPPC EHHVNGSRPP CTGEGDTPKC SKICEPGYSP TYKQDKHYGY NSYSVSNSEK DIMAEIYKNG PVEGAFSVYS DFLLYKSGVY QHVTGEMMGG HAIRILGWGV ENGTPYWLVA NSWNTDWGDN GFFKILRGQD HCGIESEVVA GIPRTDQYWE KIHVVVVVVVVV HH</pre>

Properties

Measured Molecular Weight	43 kDa, observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by reducing SDS-PAGE.
Formulation	Liquid after a 0.2 μm filtered solution in 25 mM Tris, 150 mM NaCl, 20% Glycerol, pH 8.0.
Endotoxin Level	< 0.2 EU/μg, determined by LAL method.
Storage	Recombinant Human Cathepsin B remains stable up to 6 months at lower than -70°C from date of receipt under sterile conditions. Up to 3 months at lower than -70°C under sterile conditions after opening. Avoid repeated freeze-thaw cycles.
Note	For research use only

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