

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cathepsin B. Does not cross-react with recombinant human Cathepsin A, C, D, E, L, S, V, X/Z/P, SA, or recombinant mouse Cathepsin B.
Source	Monoclonal Mouse IgG ₁ Clone # 155714
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Cathepsin B Arg18-Ile339 Accession # P07858
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Cathepsin B is the first described member of the family of lysosomal cysteine proteases (1). Cathepsin B possesses both endopeptidase and exopeptidase activities, in the latter case acting as a peptidyl-dipeptidase. It is known to process a number of proteins, including pro and active caspases, prorenin and secretory leucoprotease inhibitor (SLPI) (2 - 4). Therefore, Cathepsin B may play a role in activation and inactivation of caspases, activation of renin and inactivation of SLPI, the key steps in apoptosis, angiotensin production, and progression of emphysema, respectively. Because of its increased levels and redistribution of the enzyme in human and animal tumors, Cathepsin B may also have role in invasion and metastasis (5).

In addition to lysosome, Cathepsin B can be secreted or associated with plasma membrane, cytoplasm, and nucleus. It is synthesized as a proenzyme. Following removal of the signal peptide, the inactive proenzyme undergoes further modifications including removal of the pro region to result in the active enzyme (1).

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