

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cathepsin A/Lysosomal Carboxypeptidase A in direct ELISAs and Western blots. In Western blots, detects the single chain (55 kDa) and heavy chain (32 kDa) forms of recombinant human (rh) Cathepsin A. In Western blots, less than 5% cross-react
Source	Monoclonal Mouse IgG _{2A} Clone # 179803
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Cathepsin A/Lysosomal Carboxypeptidase A Ala29-Tyr480 (predicted) Accession # P10619
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.

Western Blot	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 A/lysosomal carboxypeptidase A is a member of the serine carboxypeptidase family (1). Cathepsin A is a multifunctional enzyme that expresses deaminidase and esterase activities at neutral pH and carboxypeptidase activity at acidic pH. Also known as protective protein, its association with β-galactosidase (β-gal) and neuraminidase is essential for β-gal stability and neuraminidase activation in the lysosomes. Inherited deficiency of Cathepsin A causes the lysosomal storage disorder galactosialidosis, characterized by a combined secondary deficiency of β-gal and neuraminidase. Cathepsin A is capable of hydrolyzing a variety of bioactive peptide hormones including tachykinins, indicating that extralysosomal Cathepsin A plays a role in regulation of functions of these molecules (2). Cathepsin A is synthesized as a single-chain precursor and processed into heavy (32 kDa) and light (20 kDa) chains, which are linked by disulfide bonds.

PRODUCT SPECIFIC NOTICES

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