Mouse Cathepsin A/ Lysosomal Carboxypeptidase A Antibody

Monoclonal Rat IgG_{2B} Clone # 191430

Catalog Number: MAB1123

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Cathepsin A/Lysosomal Carboxypeptidase A in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Cathepsin A or recombinant mouse (rm) DPPIV/CD26 is observed. In Western blots, it recognizes the single chain (55 kDa) form of rmCathepsin A, which can be processed into heavy (32 kDa) and light (20 kDa) chains. It recognizes the heavy chain, but not the light chain.
Source	Monoclonal Rat IgG_{2B} Clone # 191430
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Cathepsin A/Lysosomal Carboxypeptidase A Ala24-Tyr474 (predicted) Accession # P16675
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Mouse Cathepsin A/Lysosomal Carboxypeptidase A
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Cathepsin A/ Lysosomal Carboxypeptidase A, see our available Western blot detection antibodies

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Cathepsin A/lyososomal carboxypeptidase A is a member of the serine carboxypeptidase family (1, 2). 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 (3). 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.

References:

1. Galjart, N.J. *et al.* (1990) J. Biol. Chem. **265:**4678.
2. Pshezhetsky, A.V. (1998) in *Handbook of Proteolytic Enzymes* (ed. Barrett, Rawlings, Woessner) pp. 393, Academic Press, San Diego.
3. Hiraiwa, M. (1999) Cell. Mol. Life. Sci. **56:**894.

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449