Mouse Cathepsin A/ Lysosomal Carboxypeptidase A Antibody

Monoclonal Rat IgG_{2B} Clone # 191424

Catalog Number: MAB11231

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Cathepsin A in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Cathepsin A or recombinant mouse DPPIV/CD26 is observed.
Source	Monoclonal Rat IgG_{2B} Clone # 191424
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Cathepsin A aa 24-474
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
Immunohistochemistry	8-25 µg/mL	Perfusion fixed frozen sections of mouse spinal cord
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/lysosomal 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, *et al*. (1990) J. Biol. Chem. **265:**4678.
2. Pshezhetsky (1998) in *Handbook of Proteolytic Enzymes* (ed. Barrett, Rawlings, Woessner) pp. 393, Academic Press, San Diego.
3. Hiraiwa (1999) Cell. Mol. Life. Sci. **56:**894.

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