

Human Chymase/CMA1 Antibody

Monoclonal Mouse IgG2A Clone # 422818 Catalog Number: MAB4099

DESCRIPTION		
Species Reactivity	Human	
Specificity	Detects human Chymase/CMA1 in direct ELISAs and Western blots. Does not cross-react with recombinant mouse (rm) MCPT-1, rmMCPT-6 rmMCPT-7, or rmMCPT-11.	
Source	Monoclonal Mouse IgG _{2A} Clone # 422818	
Purification	Protein A or G purified from hybridoma culture supernatant	
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Chymase/CMA1 Gly20-Asn247 Accession # P23946	
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

DATA

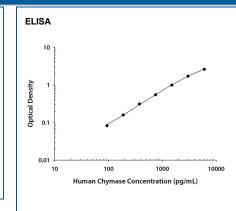
Please Note: Online dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website

	Recommended Concentration	Sample	
Western Blot	1 μg/mL	See Below	
Immunoprecipitation	25 μg/mL	Conditioned cell culture medium spiked with Recombinant Human Chymase/CMA1 (Catalog # 4099-SE), see our available Western blot detection antibodies	
ELISA	This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human Chymase/CMA1 Monoclonal Antibody (Catalog # MAB40991).		
	This product is intended for assay development on various assay platforms requiring antibody pairs. We		

recommend the Human Chymase/CMA1 DuoSet ELISA Kit (Catalog # DY4099-05) for convenient development of a sandwich ELISA.

Western Blot kDa 75 -20 -

Detection of Human Chymase/CMA1 by Western Blot. Western blot shows lysates of human small intestine tissue. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human Chymase/CMA1 Monoclonal Antibody (Catalog # MAB4099) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Chymase/CMA1 at approximately 28 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.



Human Chymase/CMA1 ELISA Standard Curve. Recombinant Human Chymase/CMA1 protein was serially diluted 2-fold and captured by Mouse Anti-Human Chymase/CMA1 Monoclonal Antibody (Catalog # MAB40991) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human Chymase/CMA1 Monoclonal Antibody (Catalog # MAB4099) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

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.

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BACKGROUND

Chymases are a group of chymotrypsin-like serine proteases secreted by mast cells (1). They are synthesized as inactive precursors containing a 2-residue propeptide, which needs to be removed by dipeptidyl peptidase I/cathepsin C for the enzymatic activity (2). Human Chymase encoded by the CMA1 gene is known to be involved in hypertention and heart failure through its ability to convert angiotensin I (Ang I) to angiotensin II (Ang II), which plays a key role in the regulation of arterial pressure (3). In addition, it is also important in physiological and pathological conditions including inflammation, fibrosis and processing of cytokines (4). Therefore, designing a specific inhibitor for Chymase activity has been a pharmacologic strategy to develop therapeutic agents.

References:

- 1. Caughey, G.H. (2004) in Handbook of Proteolytic Enzymes. Barrett, A.J. et al. ed. p. 1531, Academic Press, San Diego.
- 2. Murakami, M. et al. (1995) J. Biol. Chem. 270:2218.
- 3. Miyazaki, M. and S. Takai (2006) J. Pharmacol. Sci. 100:391.
- 4. Nakajima, M. and N. Naya (2002) Jpn. J. Pharmacol. 90:206.

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