

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Tryptase γ -1/TPSG1 in Western blots. In Western blots, approximately 5% cross-reactivity with recombinant human (rh) Tryptase α -1 and rhTryptase β -2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Tryptase γ -1/TPSG1 Arg20-Arg281 Accession # Q9NRR2
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	0.1 μ g/mL	Recombinant Human Tryptase γ -1/TPSG1 (Catalog # 1667-SE)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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

As mediators of inflammatory and allergic response, mast cells are found throughout the body concentrated near blood vessels in connective tissue and the mucous membranes of the respiratory and gastrointestinal tract (3). Upon activation, human mast cells release granules that are enriched with neutral serine proteases including Tryptases, chymase and cathepsin G (4). Tryptase γ -1, also called transmembrane Tryptase, is encoded by TPSG1, one of many serine protease genes clustered in human chromosome 16p13.3 (5). Human Tryptase γ -1 is synthesized as a 321 amino acid preproenzyme with a C-terminal transmembrane anchor (1, 2). The rhTPSG1 was expressed as a soluble protein terminated at residue 281 and corresponded to the proenzyme. The proenzyme can be cleaved by trypsin to form the active enzyme. The serine protease activity of trypsin-activated rhTPSG1 can be inhibited by ecotin (R&D Systems, Catalog # 1328-PI). Greater than 95% protease activity is inhibited by ecotin at approximately 10:1 molar ratio.

References:

1. Wong, G.W. *et al.* (1999) J. Biol. Chem. **274**:30784.
2. Caughey, G.H. *et al.* (2000) J. Immunol. **164**:6566.
3. Harris, J.L. *et al.* (2001) J. Biol. Chem. **276**:34941.
4. Miller, H.R.P. and A.D. Pemberton (2002) Immunology **105**:375.
5. Wong, G.W. *et al.* (2002) J. Biol. Chem. **277**:41906.