

#### DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                                                  |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human Tryptase $\gamma$ -1/TPSG1 in direct ELISAs and Western blots.                                           |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                                                    |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                                              |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant human Tryptase $\gamma$ -1/TPSG1<br>Arg20-Arg281<br>Accession # Q9NRR2 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                        |
| <b>Formulation</b>                                                                                                                                                                                      | 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.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunoprecipitation</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### 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  $\gamma$ -1, also called transmembrane Tryptase, is encoded by TPSG1, one of many serine protease genes clustered in human chromosome 16p13.3 (5). Human Tryptase  $\gamma$ -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.

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