



# Monoclonal Anti-human Trypsin-3 Antibody

## ORDERING INFORMATION

**Catalog Number:** MAB3710

**Clone:** 420025

**Lot Number:** ZMX01

**Size:** 100 µg

**Formulation:** 0.2 µm filtered solution in PBS with 5% trehalose

**Storage:** -20° C

**Reconstitution:** sterile PBS

**Specificity:** human Trypsin-3

**Immunogen:** NS0-derived rhTrypsin-3

**Ig class:** rat IgG<sub>2A</sub>

**Recommended Application:**  
Neutralization activity

**Other Application:**  
Western blot

## Background

Trypsin-3, also known as mesotrypsin, is one of the three trypsins produced by pancreas. It consists of a pro peptide (aa 16 to 23) and a mature chain (aa 24 to 247). The amino acid sequence of human trypsin 3 is 96%, 76%, 74%, 72% and 67% identical to that of chimpanzee, rat, mouse, dog and chicken.

## Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, NS0-derived, recombinant human trypsin 3 encoded by the PRSS3 gene (rhTrypsin 3; Accession # NP\_002762; aa 16 - 247; R&D Systems, Catalog # 3710-SE). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

## Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

## Endotoxin Level

< 0.1 EU per 1 µg of the antibody as determined by the LAL method.

## Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

## Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

## Specificity

This antibody recognizes both pro and mature forms of rhTrypsin 3 in Western blot. In Western blots, this antibody shows no cross-reactivity with rhTrypsin-1 or rhTrypsin-2.

## Applications

**Neutralization** - This antibody has been used to inhibit/neutralize the enzymatic activity of active rhTrypsin 3 (R&D Systems, Catalog # 3714-SE). The antibody was preincubated with the enzyme at different molar ratios at room temperature for 30 minutes. The enzyme was then assayed with a fluorogenic peptide substrate (R&D Systems, Catalog # ES002). 50% of the proteolytic activity was inhibited by the antibody at approximately 0.15 µg/mL (IC<sub>50</sub>) under conditions in which the enzyme was present at 0.03 µg/mL and the substrate concentration was 10 µM. Considering the molecular masses of the enzyme (26 kDa) and the antibody (150 kDa), IC<sub>50</sub> was achieved at approximately 1:1 molar ratio of the antibody to the enzyme.

**Western blot** - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human Trypsin-3. Using a colorimetric detection system, the detection limit for rhTrypsin-3 is approximately 25 ng/lane under non-reducing conditions. Use of this antibody under reducing conditions is not recommended. Chemiluminescent detection with WesternGlo™ Chemiluminescent Detection Substrate (R&D Systems Catalog # AR004) will increase sensitivity by 5 to 50 fold. For reducing conditions, MAB37101 and AF3586 are recommended.

**Optimal dilutions should be determined by each laboratory for each application.**