

TPSAB1 Protein, Human, Recombinant (His)

General Information

Synonyms:	TPS1;tryptase alpha/beta 1;TPS2;tryptase α/β 1;tryptase α/β 1;TPSB1;TPSAB1;Tryptase 1
Protein Construction:	Ile31-Pro275
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q86TM8
Molecular Weight:	32-38 KDa (reducing condition)
AA Sequence:	Ile31-Pro275

QC Testing

Biological Activity:	Loaded Anti-Human Tryptase mAb-Fc on Protein A Biosensor, can bind Human TPSAB1-His with an affinity constant of 0.92 nM as determined in BLI assay. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/ μ g (1 EU/ μ g) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing 1M NaCl, 0.05 mM Heparin, 50 mM sodium acetate, 0.01% sodium azide, pH 5.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Tryptases are serine proteases with trypsin-like specificity. Together with chymases and Cathepsin G, tryptases are important players in mast cell mediation of inflammatory and allergic responses. Tryptase alpha/beta-1 (TPSAB1), also known as mast cell protease 7 (MCPT7), it exhibits anticoagulant activity due to its ability to degrade fibrinogen in the presence of a diverse array of protease inhibitors in plasma. The two Isoform 1 and isoform 2 are expressed in lung, stomach, spleen, heart and skin; in these tissues, isoform 1 is predominant. Isoform 2 is

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expressed in aorta, spleen, and breast tumor, with highest levels in the endothelial cells of some blood vessels surrounding the aorta, as well as those surrounding the tumor and low levels, if any, in mast cells. Isoform 2 cleaves large substrates, such as fibronectin, more efficiently than isoform 1, but seems less efficient toward small substrates. It may play a role in innate immunity.

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