Data Sheet (Cat.No.TMPY-02574)

TargetMol

Chymase 1 Protein, Human, Recombinant (His)

General Information

Synonyms:	MCT1;chymase 1, mast cell;chymase;CYH
Protein Construction:	A DNA sequence encoding the human CMA1 (P23946) (Met 1-Asn 247) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Gly 20
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P23946
Molecular Weight:	26.6 kDa (predicted); 33 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 92 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, pH 7.4, 10% gly.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

The STR polymorphism in the CMA1 gene is associated with asthma and that this association is even stronger with atopic asthma. CMA1 and IL-4 in atopic asthma and for IL-4 in atopy in general. The local angiotensin II system (LAS) has numerous functions, including the regulation of growth and differentiation in the gastrointestinal tract. Angiotensin II (AngII) may be generated by angiotensin-I-converting enzyme (ACE) or mast cell chymase (CMA1) and plays an important role in inflammatory processes, although opinions differ as to which AngII-generating enzyme is primarily associated with AngII-mediated effects. ACE in the gastric mucosa and the microvasculature of granulation tissue may represent a novel therapeutic target for the promotion of healing processes in gastritis and ulceration using ACE inhibitors or AT1R antagonists. The gene for mast cell chymase (CMA1) is an ideal candidate

for investigating genetic predisposition to atopic asthma, as it is an important mediator of inflammation and remodeling in the asthmatic lung. (CMA1) is important for the generation of angiotensin II and therefore might be associated with the pathogenesis of hypertension.

Reference

Takai S,et al.(2003) Effect of chymase inhibitor on vascular proliferation. Jpn J Pharmacol. 90 (3): 223-7.
Caughey GH,et al.(1993) The human mast cell chymase gene (CMA1): mapping to the cathepsin G/granzyme gene cluster and lineage-restricted expression. Genomics. 15 (3): 614-20.
Urata H,et al.(1991) Cloning of the gene and cDNA for human heart chymase. J Biol Chem. 266 (26): 17173-9.