

MMP-19 Protein, Human, Recombinant

General Information

Synonyms:	MMP18;matrix metalloproteinase 19;RASI-1
Protein Construction:	A DNA sequence encoding the catalytic domain of human MMP19 (Q99542-1) (Leu101-Gly256) was expressed, with a N-terminal Met. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q99542-1
Molecular Weight:	17.6 kDa (predicted); 18 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:	> 85 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 20 mM Tris, 100 mM NaCl, 0.5M Arg, 5 mM CaCl ₂ , 0.03% Brij35, 50µM ZnCl ₂ , 1/0.1 mM GSH/GSSG, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

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 recombinant proteins at -20°C to -80°C for future use. 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

MMP19, also known as RASI-1, is a member of the peptidase M1A family. It contains 4 hemopexin-like domains and is expressed in the mammary gland, placenta, lung, pancreas, ovary, small intestine, spleen, thymus, prostate, testis colon, heart, and blood vessel walls. It is a matrix metalloproteinase (MMP). Proteins of the MMP family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic

development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. Most MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. MMP19 may play a role in pathological processes participating in rheumatoid arthritis (RA)-associated joint tissue destruction. Autoantigen anti-MMP19 is frequent in RA patients.

Reference

Cossins J., et al.,(1996), Identification of MMP-18, a putative novel human matrix metalloproteinase. *Biochem. Biophys. Res. Commun.* 228:494-498.

Pendas A.M., et al., (1997), Identification and characterization of a novel human matrix metalloproteinase with unique structural characteristics, chromosomal location and tissue distribution. *J. Biol. Chem.* 272:4281-4286.

Kolb C., et al.,(1997), The matrix metalloproteinase RASI-1 is expressed in synovial blood vessels of a rheumatoid arthritis patient. *Immunol. Lett.* 57:83-88.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481