

Recombinant Rat MMP3 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52234

Size: 10ug, 100ug

Protein Name: Stromelysin-1 (SL-1) (EC 3.4.24.17) (Matrix metalloproteinase-3) (MMP-3) (PTR1 protein) (Transin-1)

Synonym: Mmp3

UniProt ID: P03957

UniProt Link: www.uniprot.org/uniprotkb/P03957/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 475 AA

Molecular Weight: 53 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MKGLPVLLWLCTAVCSSYPLHGSEEDAGMEVLQKYLENYYGLEKDVKQFTKKKDSSPVVKKIQEMQ
KFLGLKMTGKLDSENTMELMHKPRCGVPDVGGFSTFPGSPKWRKNHISYRIVNYTLDLPRESVDSAIE
RALKVWEEVTPLTFSRISEGEADIMISFAVEEHGDFIPFDGPGMVLAHAYAPGPGTNGDAHFDDEDER
WTDDVTGTNLFLVAAHELGHSLGLFHSANAEALMYPVYKSSTDLARFHLSDDDVDGIQSLYGPPTES
PDVLVVPTKSNSLDPETLPMCSSALSFDAVSTLRGEVLFFKDRHFWRKSLRTPEPGFYLISSFWPSL
PSNMDAAAYEVTNRDITVFIKGNQIWAIRGHEELAGYPKSIHTLGLPETVQKIDAAISLKDQKKTYFFVE
DKFWRWFDEKKQSMDPEFPRKIAENFPGIGTKVDAVFEAFGLYFFSGSSQLEFDPNAGKVTHILKSN
SWFNC

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Stromelysin-1 (SL-1) (EC 3.4.24.17) (Matrix metalloproteinase-3) (MMP-3) (PTR1 protein) (Transin-1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Can degrade fibronectin, laminin, gelatins of type I, III, IV, and V; collagens III, IV, X, and IX, and cartilage proteoglycans. Activates procollagenase.; Metalloproteinase with a rather broad substrate specificity that can degrade fibronectin, laminin, gelatins of type I, III, IV, and V; collagens III, IV, X, and IX, and cartilage proteoglycans. Activates different molecules including growth factors, plasminogen or other matrix metalloproteinases such as MMP9. Once released into the extracellular matrix (ECM), the inactive pro-enzyme is activated by the plasmin cascade signaling pathway. Also acts intracellularly. For example, in dopaminergic neurons, gets activated by the serine protease HTRA2 upon stress and plays a pivotal role in DA neuronal degeneration by mediating microglial activation and alpha-synuclein/SNCA cleavage. In addition, plays a role in immune response and possesses antiviral activity against various viruses. Mechanistically, translocates from the cytoplasm into the cell nucleus upon virus infection to influence NF-kappa-B activities.

Subcellular Localization: Secreted, extracellular space, extracellular matrix . Secreted .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.