

Recombinant Rat TIMP1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52335

Size: 10ug, 100ug

Protein Name: Metalloproteinase inhibitor 1 (Tissue inhibitor of metalloproteinases 1) (TIMP-1)

Synonym: Timp1, Timp-1

UniProt ID: P30120

UniProt Link: www.uniprot.org/uniprotkb/P30120/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 217 AA

Molecular Weight: 24 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAPFASLASGILLLLSLIASSKACSCAPTHPQTAFCSNDLVIRAKFMGSPEIIETTLTYQRYEIKMTKMLK
GFDVAVGNATGFRFAYTPAMESLCGYVHKSQNRSEEFLLIAGRLRNGNLHITACSFVLPWHNLSPAQQ
KAFVKTYSAAGCGVCTVFPCSAIPCKLES DSHCLWTDQILMGSEKGYQSDHFACLP RNPDLCTWQYL
GVSMTRSLPLAKAEA

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 Metalloproteinase inhibitor 1 (Tissue inhibitor of metalloproteinases 1) (TIMP-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: Metalloproteinase inhibitor that functions by forming one to one complexes with target metalloproteinases, such as collagenases, and irreversibly inactivates them by binding to their catalytic zinc cofactor. Acts on MMP1, MMP2, MMP3, MMP7, MMP8, MMP9, MMP10, MMP11, MMP12, MMP13 and MMP16. Does not act on MMP14. Also functions as a growth factor that regulates cell differentiation, migration and cell death and activates cellular signaling cascades via CD63 and ITGB1. Plays a role in integrin signaling. Also stimulates steroidogenesis by Leydig and ovarian granuloma cells; procathepsin L is required for maximal activity.

Subcellular Localization: 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.