



Genorise® Recombinant Human TIMP1

Catalog Number: GR119220

TIMP metalloproteinase inhibitor 1 (TIMP1), a tissue inhibitor of metalloproteinases, a member of the TIMP family, is a glycoprotein that is expressed from the several tissues of organisms. The glycoprotein is a natural inhibitor of the matrix metalloproteinases (MMPs), a group of peptidases involved in degradation of the extracellular matrix. In addition to its inhibitory role against most of the known MMPs, the encoded protein is able to promote cell proliferation in a wide range of cell types, and may also have an anti-apoptotic function. Transcription of this gene is highly inducible in response to many cytokines and hormones. In addition, the expression from some but not all inactive X chromosomes suggests that this gene inactivation is polymorphic in human females. In adrenocortical cells the trophic hormone ACTH induces expression of TIMP-1 and the increase in TIMP expression is also associated with decreased collagenase activity.^[1] Increased expression of TIMP1 has been found to be associated with worse prognosis of various tumors, such as laryngeal carcinoma^[2] or melanoma.^[3]

References

1. Reichenstein M, et al. (2004). *Mol. Cell. Endocrinol.* 215 (1-2): 109–14.
2. Ma J (2013). *Int J Clin Exp Pathol.* 15 (1): 246–54.
3. Tarhini AA (2014). *J Transl Med.* 12.

Related products

1. GR238016 50 ml Reagent Reservoir, 100/case, 5 packs/case (pack of 20)
2. GR238004 Tissue Culture 96-well Microplate, individually packed, Case of 50
3. GR238019 1.5 ml Microcentrifuge tube with screw cap and free-standing, pack of 500
4. GR238007 125 ml leak-resistant HDPE bottle, colorless, pack of 24
5. GR238002 Microplate 12x8-Well Strip High Binding, Case of 50
6. GR238003 Microplate 12x8-Well Strip Medium Binding, Case of 50
7. GR238032 42592 Costar Stripwell Microplate 1 x 8 Flat Bottom, High Binding, Case of 100
8. GR238001 468667 Thermo Microplate 12x8-Well Strip Nunc Maxisorp F8, Case of 60
9. GR238031 96-well microplate sealer plastic, pack of 100



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Description

Source: *E. coli* derived

Composition: Met1-Ala207

Accession # NP_003245.1

N-terminal Sequence Analysis: Met

Structure/Form: Monomer

Predicted Molecular Mass: 23 kDa

Specifications

SDS-PAGE: 23 kDa, reducing conditions

Activity: Measured by its ability to inhibit human MMP-

2 cleavage of a fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH₂. The IC₅₀ value is 3 nM as measured under the described conditions.

Endotoxin Level: < 1 EU per 1 µg of the protein by the LAL method.

Purity: > 95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation: Lyophilized from a 0.2 µm filtered PBS with BSA as a carrier protein.

Preparation and Storage

Reconstitution: Reconstitute at 100-500 µg/mL in sterile PBS containing 0.1% human or bovine serum albumin.

Shipping: The product is shipped at ambient temperature or in a foam box with ice pads. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage: Use a manual defrost freezer and avoid repeated freeze thaw cycles.

- 6 months from date of receipt, -20 to -70°C as supplied.
- 1 month, -20 to -70°C under sterile conditions after reconstitution.

DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

**FOR LABORATORY RESEARCH USE ONLY
NOT FOR USE IN HUMANS AND ANIMALS**