



Genorise® Recombinant Canine MMP-3

Catalog Number: GR122051

MMP-3 is a member of the matrix metalloproteinase (MMP) family are involved in the breakdown of extracellular matrix and during tissue remodeling in normal physiological processes, such as embryonic development and reproduction, as well as in disease processes, such as arthritis, and tumour metastasis. Most MMPs are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. The MMP-3 enzyme degrades collagen types II, III, IV, IX, and X, proteoglycans, fibronectin, laminin, and elastin. In addition, MMP-3 can also activate other MMPs such as MMP-1, MMP-7, and MMP-9, rendering MMP-3 crucial in connective tissue remodeling.^[1] The enzyme is thought to be involved in wound repair, progression of atherosclerosis, and tumor initiation. Expression of MMP3 is primarily regulated at the level of transcription, where the promoter of the gene responds to various stimuli, including growth factors, cytokines, tumor promoters, and oncogene products.^[2] Recently, the MMP-3 gene was shown to be down-regulated in individuals with cleft lip and palate when compared to controls,^[3] reinforcing the nature of cleft lip/palate as a condition resulting from insufficient or defective embryonic tissue remodeling.

References

1. Ye S, et al. (1996). *J. Biol. Chem.* **271** (22): 13055–60.
2. Matrisian LM (1990). *Trends Genet.* **6** (4): 121–5.
3. Bueno DF, et al. (2010). *Stem Cell Rev* **7** (2): 446–457.

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



Genorise® Recombinant Canine MMP-3 Protein DataSheet

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Description

Source: *E. coli* derived

Composition: Asp131-Cys478

Accession # Q6Y4Q5

N-terminal Sequence Analysis: Asp

Structure/Form: Monomer

Predicted Molecular Mass: 38 kDa

Specifications

SDS-PAGE: 38 kDa, reducing conditions

Activity: Measured by its ability to cleave a fluorogenic peptide substrate Mca-RPKPVE-Nval-WRK(Dpa)-NH₂.

The specific activity is 145 pmol/min/μg, as measured under the described conditions.

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

Purity: > 95%, by SDSPAGE 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% Canine 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 CANINES AND ANIMALS.

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NOT FOR USE IN CANINES AND ANIMALS**