

Mouse MMP-2 / MMP2 Protein (His Tag)

Catalog Number: 52740-M07H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Clg4a; GelA; MMP-2

Protein Construction:

A DNA sequence encoding the mouse Mmp2 (NP_032636.1) (Met409-Cys662) was expressed with a polyhistidine tag at the N-terminus.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant mouse Mmp2 consists 273 amino acids and predicts a molecular mass of 30.9 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

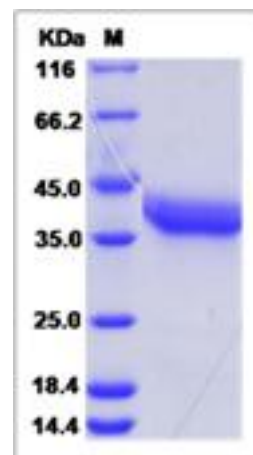
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Matrix Metalloproteinase-2 (MMP-2) is an enzyme that degrades components of the extracellular matrix and thus plays a pivotal role in cell migration during physiological and pathological processes. MMP-2 expression is dependent on extracellular matrix metalloproteinase inducer (EMMPRIN), Her2/neu, growth factors, cytokines, and hormones. Pro-MMP-2 activation needs MT1-MMP and TIMP-2 contribution. MMP-2 is changed in distribution and increased in amount in the ventral cochlear nucleus after unilateral cochlear ablation. A low level of MMP-2 is linked to favorable prognosis in patients with a hormone receptor-negative tumor, usually associated with high risk. As a zymogen requiring proteolytic activation for catalytic activity, MMP-2 has been implicated broadly in the invasion and metastasis of many cancer model systems, including human breast cancer (HBC). Blocking MMP-2 secretion and activation during breast carcinoma development may decrease metastasis. The detection of active MMP-2 alone or the rate of pro-MMP-2 and active MMP-2 is considered a very sensitive indicator of cancer metastasis. Modulation of MMP-2 expression and activation through specific inhibitors and activators may thus provide a new mechanism for breast cancer treatment.

References

1. Thompson EW, *et al.* (1994) Collagen induced MMP-2 activation in human breast cancer. *Breast Cancer Res Treat.* 31(2-3): 357-70.
2. Jezierska A, *et al.* (2009) Matrix metalloproteinase-2 involvement in breast cancer progression: a mini-review. *Med Sci Monit.* 15(2): RA32-40.
3. Fredrich M, *et al.* (2010) MMP-2 is involved in synaptic remodeling after cochlear lesion. *Neuroreport.* 21(5): 324-7.

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