

Recombinant Human MMP2 protein, His-tagged

Cat. No. MMP2-244H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human MMP2 fused with His tag was expressed in E. coli.

Species Human

Source E.coli

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.

Form Lyophilized from sterile PBS, pH 7.4

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Purity > 95 % as determined by SDS-PAGE

Storage Store at -70 centigrade. Avoid repeated freeze/thaw cycles.

GENE INFORMATION

Gene Name MMP2 matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase) [Homo sapiens]

Official Symbol MMP2

Synonyms MMP2; matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase); CLG4, CLG4A, matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase) , matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase); 72 kDa type IV collagenase; TBE 1; MMP-2; gelatinase A; 72 kDa gelatinase; collagenase type IV-A; neutrophil gelatinase; matrix metalloproteinase-2; matrix metalloproteinase-II; CLG4; MONA; CLG4A; TBE-1; MMP-II;

Gene ID 4313

mRNA Refseq NM_001127891

Protein Refseq NP_001121363

MIM 120360

UniProt ID P08253

Chromosome Location 16q13-q21

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Pathway

ATF-2 transcription factor network, organism-specific biosystem; Activation of Matrix Metalloproteinases, organism-specific biosystem; Angiotensin receptor Tie2-mediated signaling, organism-specific biosystem; Bladder cancer, organism-specific biosystem; Bladder cancer, conserved biosystem; Degradation of the extracellular matrix, organism-specific biosystem; Diabetes pathways, organism-specific biosystem;

Function

metal ion binding; metalloendopeptidase activity; peptidase activity; zinc ion binding;

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