Recombinant Rat Mmp2 protein, His-tagged

Cat. No. Mmp2-246R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Mmp2 fused with His tag was expressed in E. coli.
Species	Rat
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

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Purity	> 95 % as determined by SDS-PAGE
Storage	Store at -70 centigrade. Avoid repeated freeze/thaw cycles.

GENE INFORMATION

Gene Name	Mmp2 matrix metallopeptidase 2 [Rattus norvegicus]
Official Symbol	Mmp2
Synonyms	MMP2; matrix metallopeptidase 2; 72 kDa type IV collagenase; MMP-2; gelatinase A; 72 kDa gelatinase; matrix metalloproteinase 2; matrix metalloproteinase-2;
Gene ID	81686
mRNA Refseq	NM_031054
Protein Refseq	NP_112316
UniProt ID	P33436
Chromosome Location	19p11
Pathway	Bladder cancer, organism-specific biosystem; Bladder cancer, conserved biosystem; GnRH signaling pathway, organism-specific biosystem; GnRH signaling pathway, conserved biosystem; IL-3 Signaling Pathway, organism-specific biosystem; Leukocyte transendothelial migration, organism-specific biosystem; Leukocyte transendothelial migration, conserved biosystem;
Function	fibronectin binding; metal ion binding; metalloendopeptidase activity;

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	metalloendopeptidase activity; metallopeptidase activity; peptidase activity; zinc ion binding;

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