

## Recombinant Rat Mmp2 protein, His-tagged

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

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Rat Mmp2 fused with His tag was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Species</b>          | Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description</b>      | <p>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.</p> |
| <b>Form</b>             | Lyophilized from sterile PBS, pH 7.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

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

|                            |                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>              | > 95 % as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                       |
| <b>Storage</b>             | Store at -70 centigrade. Avoid repeated freeze/thaw cycles.                                                                                                                                                                                                                                                                                                            |
| <b>GENE INFORMATION</b>    |                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Gene Name</b>           | Mmp2 matrix metalloproteinase 2 [ Rattus norvegicus ]                                                                                                                                                                                                                                                                                                                  |
| <b>Official Symbol</b>     | Mmp2                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Synonyms</b>            | MMP2; matrix metalloproteinase 2; 72 kDa type IV collagenase; MMP-2; gelatinase A; 72 kDa gelatinase; matrix metalloproteinase 2; matrix metalloproteinase-2;                                                                                                                                                                                                          |
| <b>Gene ID</b>             | 81686                                                                                                                                                                                                                                                                                                                                                                  |
| <b>mRNA Refseq</b>         | NM_031054                                                                                                                                                                                                                                                                                                                                                              |
| <b>Protein Refseq</b>      | NP_112316                                                                                                                                                                                                                                                                                                                                                              |
| <b>UniProt ID</b>          | P33436                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Chromosome Location</b> | 19p11                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Pathway</b>             | 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; |
| <b>Function</b>            | fibronectin binding; metal ion binding; metalloendopeptidase activity;                                                                                                                                                                                                                                                                                                 |

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

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

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

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

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

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

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