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## Product Datasheet

### Human MMP13 protein, His tag (active), Unconjugated GTX00191-PRO

|                            |                                                                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Article Name               | Human MMP13 protein, His tag (active), Unconjugated                                                                                                                         |
| Biozol Catalog Number      | GTX00191-PRO                                                                                                                                                                |
| Supplier Catalog Number    | GTX00191-pro                                                                                                                                                                |
| Alternative Catalog Number | GTX00191-PRO-10                                                                                                                                                             |
| Manufacturer               | GeneTex                                                                                                                                                                     |
| Category                   | Proteine/Peptide                                                                                                                                                            |
| Application                | FA                                                                                                                                                                          |
| Species Reactivity         | Human                                                                                                                                                                       |
| Conjugation                | Unconjugated                                                                                                                                                                |
| NCBI                       | <a href="#">4322</a>                                                                                                                                                        |
| UniProt                    | <a href="#">P45452</a>                                                                                                                                                      |
| Buffer                     | Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose, ProClin 300. |
| Expression System          | E. coli                                                                                                                                                                     |
| Form                       | Lyophilized powder                                                                                                                                                          |
| Sequence                   | N-terminal His-Tag, Glu103~Leu290 (NP_002418.1)                                                                                                                             |

#### Application Notes

Matrix Metalloproteinase 13 (MMP13) is a member of the matrix metalloproteinase (MMP) family. MMP13 has been proposed to participate in aggrecan degradation associated with osteoarthritis and cleavage of type II collagen in osteoarthritic cartilage explants and in tumor progression and metastasis. MMP13 is likely to play a crucial role in the modulation of extracellular matrix degradation and cell-matrix interactions. In addition, it can cleave type I, III, IV, IX, X and XIV collagens and fibronectin. Thus we have chosen casein-zymography to measure the activity of MMP13. Briefly, various concentrations of MMP13 (10 µg, 5 µg, 1 µg, 0.1 µg, 0.01 µg) were denatured by SDS loading buffer, electrophoresed through sodium dodecylsulphate-polyacrylamide gel (SDS-PAGE, 15% gels) containing casein (1 mg/mL) with nonreducing conditions. After renaturation, incubation and Coomassie Brilliant Blue (CBB)-stained, active MMP13 would hydrolyze casein nearby, which was indicated by the white bands on the gel. In the experiment, using a heat-denatured MMP13 protein as a negative control, and trypsin (1 µg/mL) as a positive control.