Datasheet: PHP304

BATCH NUMBER 100005645

Description:	RECOMBINANT HUMAN MMP-3
Name:	MMP-3
Other names:	Stromelysin-1
Format:	Rec. Protein
Product Type:	Recombinant Protein
Quantity:	10 µg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
ELISA	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Human

Product Form

Purified recombinant protein - lyophilized

Reconstitution

Centrifuge vial prior to reconstitution. Reconstitute to 100 µg/ml by adding 100 µl ddH_2O. Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution. Do not vortex.

Preparation

Recombinant protein expressed in *E. coli* and purified by ion exchange chromatography

Buffer Solution

50 mM Tris-HCl, pH8.0, 0.15 M NaCl

Preservative Stabilisers

1.0% Trehalose

Approx. Protein Concentrations

100 µg/ml after reconstitution

External Database Links	**UniProt:** P08254 Related reagents **Entrez Gene:** 4314 MMP3 Related reagents
Synonyms	STMY1
Product Information	**Recombinant Human MMP-3** Matrix metalloproteinase-3 (MMP-3), also known as stromelysin-1 (SL-1) and transin-1 is a member of the metzincins superfamily of proteases and is produced by various cells and tissues including the endothelium, vascular smooth muscle cells intima and platelets (Cui *et al.* 2017). MMP-3 is largely expressed by connective and vascular tissues and cells due to its roles in extracellular matrix remodeling. It is synthesized as a pre-proenzyme before being processed to remove the signal peptide forming the 57 kDa pro-MMP-3. This is then further cleaved by proteolytic enzymes to create the 45 kDa active form. Like other MMPs, MMP-3 plays a major role in tissue remodeling through the promotion of extracellular matrix (ECM) protein turnover. Specifically MMP-3 degrades the collagen proteins, type II, IV, IX as well as the proteoglycans elastin fibronectin and laminin (Cui *et al.* 2017). Through the degradation of these ECM components, growth factors and adhesion molecules, MMP-3 can modify the extracellular environment and modulate cell to cell signaling. As such, MMP-3 is implicated in synaptic plasticity through enzymatic modification of ECM constituents (Lech *et al.* 2019). This recombinant Human MMP-3 can be used to create a standard curve in a sandwich ELISA with purified Mouse anti Human MMP-3 antibody, clone I08-9G7 (MCA6258GA) as a capture antibody and biotinylated Mouse anti Human MMP-3 antibody, clone G05-6A10 (MCA6259B) as the detection antibody.
Protein Molecular Weight	21 kDa
Purity	≥95 % determined by coomassie blue staining of a reducing SDS-PAGE gel
Amino Acid Sequence	MFRTFPGIPK WRKTHLTYRI VNYTPDLPKD AVDSAVEKAL KVWEEVTPLT FSRLYEGEAD IMISFAVREH GDFYPFDGPG NVLAHAYAPG PGINGDAHFD DDEQWTKDTT GTNLFLVAAH EIGHSLGLFH SANTEALMYP LYHSLTDLTR FRLSQDDING IQSLYGPPPD SPETPLVPTE PVPPEPGTPA NCDPALSFDAV STLRGEILIF KDRHFWRKSL RKLEPELHLI SSFWPSLPSG VDAAYEVTSK DLVFIFKGNQ FWAIRGNEVR AGYPRGIHTL GFPPTVRKID AAISDKEKNK TYFFVEDKYW RFDEKRNSME PGFPKQIAED FPGIDSKIDA VFEEFGFFYF FTGSSQLEFD PNAKKVTHTL KSNSWLNC

Storage	Prior to reconstitution store at -70°C. Following reconstitution store at -80°C. This product should be stored undiluted. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the protein. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	Guaranteed for 3 months from the date of reconstitution or until the date of expiry, whichever comes first. Please see label for expiry date.
Health And Safety Information	Material Safety Datasheet documentation #20394 available at: https://www.bio-rad-antibodies.com/SDS/PHP304 20394
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

MOUSE ANTI HUMAN MMP-3 (MCA6258GA)
MOUSE ANTI HUMAN MMP-3:Biotin (MCA6259B)

ELISA Matched Pair - Capture Antibody

MOUSE ANTI HUMAN MMP-3 (MCA6258GA)

ELISA Matched Pair - Detection Antibody

MOUSE ANTI HUMAN MMP-3:Biotin (MCA6259B)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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