# RD SYSTEMS a biotechne brand

Monoclonal Rat IgG<sub>2B</sub> Clone # 377313 Catalog Number: MAB29671

DESCRIPTION

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Species Reactivity	Mouse		
Specificity	Detects the pro form of mouse MMP-7 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant mouse MMP-2, -3, -8, -9, -12, or -24 is observed.		
Source	Monoclonal Rat IgG <sub>2B</sub> Clone # 377313		
Purification	Protein A or G purified from hybridoma culture supernatant		
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse MMP-7 Leu18-Leu264 Accession # AAA99983		
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.		

### APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below

## DATA



Detection of Mouse Pro-MMP-7 by Western Blot. Western blot shows lysates of NS0 mouse myeloma cell line transfected with with mouse MMP-7. PVDF Membrane was probed with 2 µg/mL of Mouse Pro-MMP-7 Monoclonal Antibody (Catalog # MAB29671) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). For additional reference, active rmMMP-7 was derived from the proteolytic activation of Recombinant Mouse MMP-7 (Catalog # 2967-MP) (20 ng/lane) and probed with 1 µg/mL of Mouse MMP-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2967). Specific bands were detected for Pro-MMP-7 at approximately 35 kDa and active MMP-7 at approximately 23 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1

PREPARATION AND STORAGE		
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.	
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C	
Stability & Storage	<ul> <li>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</li> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> </ul>	

6 months, -20 to -70 °C under sterile conditions after reconstitution.

# BACKGROUND

Matrix metalloproteinases (MMPs) are a family of zinc and calcium dependent endopeptidases with the combined ability to degrade all the components of the extracellular matrix. MMP-7 (matrilysin) is expressed in epithelial cells of normal and diseased tissues and is capable of digesting a large series of proteins of the extracellular matrix including collagen IV and X, gelatin, casein, laminin, aggrecan, entactin, elastin, and versican (1). MMP-7 is implicated in the activation of other proteinases such as plasminogen, MMP-1, MMP-2, and MMP-9. In addition to its roles in connective tissue remodeling and cancer, MMP-7 also regulates intestinal α-defensin activation in innate host defense, releases tumor necrosis factor-α in a model of herniated disc resorption and cleaves FasL to generate a soluble form in a model of prostate involution. Structurally, MMP-7 is the smallest of the MMPs and consists of two domains: a pro-domain that is cleaved upon activation and a catalytic domain containing the zinc-binding site.

### References:

1. Woessner, J.F. (2004) in Handbook of Proteolytic Enzymes, Barrett, A.J. et al. eds. p. 532.

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