

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human MMP-13 in direct ELISAs and Western blots. Detects both pro and active forms of human MMP-13 in Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human MMP-1, -2, -3, -7, -8, -9, -10, or -12 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 87512
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human MMP-13 Leu20-Cys471 Accession # P45452
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 as a 0.2 µm filtered solution in PBS.

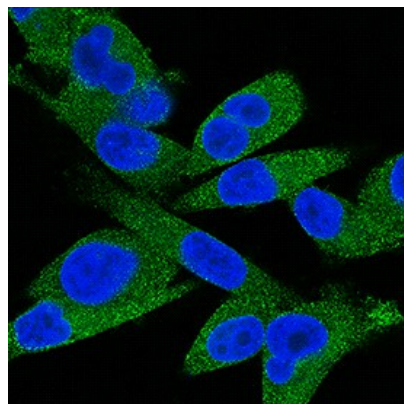
APPLICATIONS

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	1 µg/mL	Recombinant Human MMP-13 Western Blot Standard (Catalog # WBC020)
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human MMP-13 (Catalog # 511-MM), see our available Western blot detection antibodies
Immunoaffinity Purification	Sephacrose beads coupled with this antibody have been used to immunoprecipitate and immunopurify Recombinant Human MMP-13 (Catalog # 511-MM) from conditioned media.	

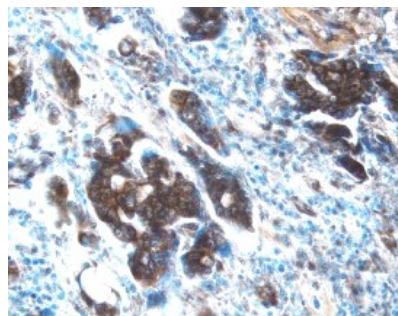
DATA

Immunocytochemistry



MMP-13 in MDA-MB-231 Human Cell Line. MMP-13 was detected in immersion fixed MDA-MB-231 human breast cancer cell line using Human MMP-13 Monoclonal Antibody (Catalog # MAB511) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 493-conjugated Anti-Mouse IgG Secondary Antibody (green; Catalog # NL009) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



MMP-13 in Human Ovarian Cancer Tissue. MMP-13 was detected in immersion fixed paraffin-embedded sections of human ovarian cancer tissue using 8 µg/mL Mouse Anti-Human MMP-13 Monoclonal Antibody (Catalog # MAB511) overnight at 4 °C. Tissue was stained with the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

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	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Matrix metalloproteinases are a family of zinc and calcium dependent endopeptidases with the combined ability to degrade all the components of the extracellular matrix. MMP-13 (Collagenase-3) has been demonstrated to degrade a range of extracellular matrix proteins, including collagen types I, II, III, IV, IX, X and XIV, gelatin, aggrecan, perlecan and fibronectin. MMP-13 is distinguished from the other human collagenases by its efficient degradation of type II collagen. MMP-13 is expressed by fibroblasts, chondrocytes and squamous epithelial cells. Structurally, MMP-13 may be divided into several distinct domains; a pro-domain which is cleaved upon activation; a catalytic domain containing the zinc binding site; a short hinge region and a carboxyl terminal (hemopexin-like) domain.

References:

1. Jeffery, J.J. (1998) in *Collagenase* 3. A.J. Barrett, *et al.* (eds): Handbook of Proteolytic Enzymes, San Diego: Academic Press, p. 1167.