

## DESCRIPTION

|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | 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. |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 87512   |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant  |
| <b>Immunogen</b>          | Chinese hamster ovary cell line CHO-derived recombinant human MMP-13<br>Leu20-Cys471<br>Accession # P45452  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.   |

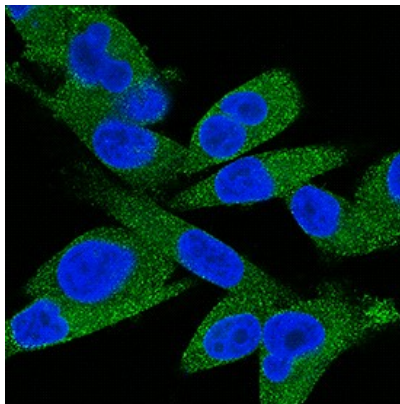
## APPLICATIONS

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

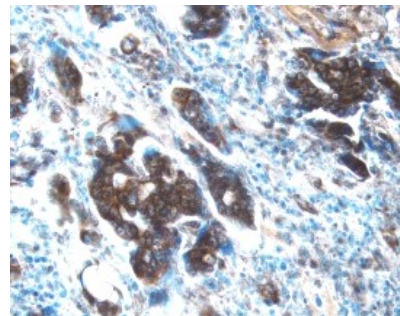
## DATA

### 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

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.5 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <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> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## 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.