# Human MMP-2 Antibody

Monoclonal Mouse $IgG_1$ Clone # 36006

Catalog Number: MAB902

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects pro/active forms of human MMP-2 in Western blots. In Western blots, no cross-reactivity with recombinant human (rh) MMP-9, rhMMP-1, or rhMMP-3 is observed. |
| **Source** | Monoclonal Mouse $IgG_1$ Clone # 36006 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Chinese hamster ovary cell line CHO-derived recombinant human MMP-2 |
| **Formulation** | 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 |
|---|---|---|
| **Dual RNAscope ISH-IHC Compatible** | 3-25 µg/mL | Immersion fixed paraffin-embedded sections of human stomach |
| **Western Blot** | 1 µg/mL | Recombinant Human MMP-2 Western Blot Standard (Catalog # WBC025) under non-reducing conditions only |
| **Immunohistochemistry** | 50-100 µg/mL | See Below |



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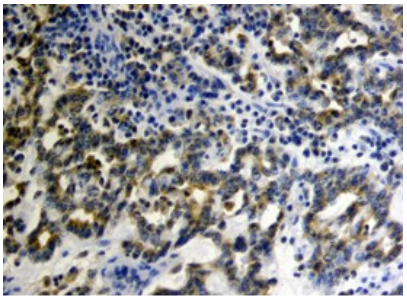
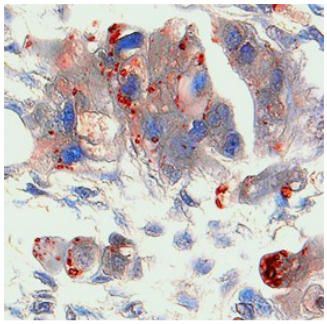
## DATA

### Immunohistochemistry



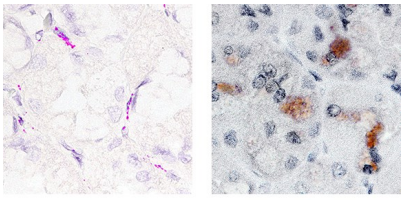
**MMP-2 in Human Ovarian Cancer Tissue.** MMP-2 was detected in immersion fixed paraffin-embedded sections of human ovarian cancer tissue using Mouse Anti-Human MMP-2 Monoclonal Antibody (Catalog # MAB902) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

### Immunohistochemistry



**MMP-2 in Human Ovarian Cancer Tissue.** MMP-2 was detected in immersion fixed paraffin-embedded sections of human ovarian cancer tissue using Mouse Anti-Human MMP-2 Monoclonal Antibody (Catalog # MAB902) at 15 µg/mL overnight at 4 °C. Tissue was stained (red) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

### In-situ Hybridization



In Situ Hybridization (ISH) Immunohistochemistry (IHC)

**Detection of MMP-2 in Human Stomach.** Formalin-fixed paraffin-embedded tissue sections of human stomach were probed for MMP2 mRNA (ACD RNAScope Probe, catalog #311751; Fast Red chromogen, ACD catalog # 322750). Adjacent tissue section was processed for immunohistochemistry using mouse anti-human MMP2 monoclonal antibody (R&D Systems catalog # Catalog # MAB902) at 5ug/mL with overnight incubation at 4 degrees Celsius followed by incubation with anti-mouse IgG VisUCyte HRP Polymer Antibody (Catalog # Catalog # VC001) and DAB chromogen (yellow-brown). Tissue was counterstained with hematoxylin (blue). Specific staining was localized to fibroblasts.

## PREPARATION AND STORAGE

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| **Reconstitution** | Reconstitute at 0.5 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration. |
| **Shipping** | Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>• 12 months from date of receipt, -20 to -70 °C as supplied.<br>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>• 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-2 (gelatinase A), a type IV collagenase, can degrade a broad range of substrates including type IV, V, VII and X collagens as well as elastin and fibronectin. It is believed to act synergistically with interstitial collagenase (MMP-1) in the degradation of fibrillar collagens as it degrades their denatured gelatin forms. MMP-2 has been shown to be associated with many connective tissue cells as well as neutrophils, macrophages and monocytes. Structurally, MMP-2 may be divided into several distinct domains: a pro-domain which is cleaved upon activation; a catalytic domain containing the zinc binding site; a fibronectin-like domain thought to play a role in substrate targeting;and a carboxyl terminal (hemopexin-like) domain containing 2 N-linked glycosylation sites.



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