# Human/Primate MMP-3 Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF513

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human/Primate |
| **Specificity** | Detects human and primate MMP-3 in ELISAs and Western blots. In sandwich ELISAs, less than 2.5% cross-reactivity with recombinant human<br>(rh) MMP-10 is observed and less than 0.1% cross-reactivity with rhMMP-1, -2, -7, -8, -9, -12, -13, and recombinant mouse MMP-9 is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human MMP-3<br>Tyr18-Cys477 (Lys45Glu)<br>Accession # P08254 |
| **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. |

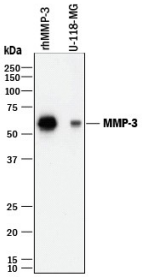
## APPLICATIONS

**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 |
|---|---|---|
| **Western Blot** | 2 µg/mL | See Below |
| **Immunohistochemistry** | 5-15 µg/mL | See Below |
| **Immunoprecipitation** | 25 µg/mL | Conditioned cell culture medium spiked with Recombinant Human MMP-3 (Catalog # 513-MP), see our available Western blot detection antibodies |
| ***Human/Primate MMP-3 Sandwich Immunoassay*** | | **Reagent** |
| **ELISA Capture** | 0.2-0.8 µg/mL | Human/Primate MMP-3 Antibody (Catalog # AF513) |
| **ELISA Detection** | 0.1-0.4 µg/mL | Human/Primate MMP-3 Biotinylated Antibody (Catalog # BAF513) |
| **Standard** | | Recombinant Human MMP-3 (Catalog # 513-MP) |

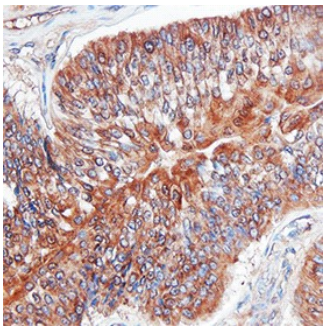
## DATA

### Western Blot



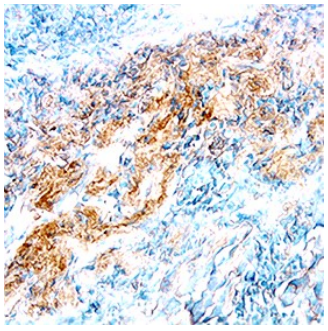

**Detection of Human MMP-3 by Western Blot.** Western blot shows Recombinant Human MMP-3 Western Blot Standard Protein (Catalog # WBC015) and lysate of U-118-MG human glioblastoma/astrocytoma cell line. PVDF membrane was probed with 2 µg/mL of Goat Anti-Human/Primate MMP-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF513) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for MMP-3 at approximately 57-60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Immunohistochemistry



**MMP-3 in Human Bladder Cancer Tissue.** MMP-3 was detected in immersion fixed paraffin-embedded sections of human bladder cancer tissue using Goat Anti-Human/Primate MMP-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF513) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to epithelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

### Immunohistochemistry



**MMP-3 in Human Lung Cancer.** MMP-3 was detected in immersion fixed paraffin-embedded sections of human lung cancer using Goat Anti-Human/Primate MMP-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF513) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.



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Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF513

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | 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 |
| **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-3 (stromelysin-1) can degrade a broad range of substrates including collagen α chains, aggrecan, laminin, fibronectin, elastin, casein, α-1 antitrypsin, myelin basic protein, IL-1β, IGFBP-3, pro-MMP-1, pro-MMP-7, pro-MMP-8, pro-MMP-9, and pro-MMP-13. MMP-3 does not cleave the triple helical region of interstitial collagens, a characteristic which distinguishes the stromelysins from the collagenases. The MMP-3 substrate repertoire extends beyond extracellular matrix proteins and implicates MMP-3 in roles other than direct tissue remodelling, for instance, enzyme cascades and cytokine regulation. MMP-3 is expressed by fibroblasts, chrondrocytes, osteoblasts, endothelial cells, smooth muscle cells, and macrophages. Structurally, MMP-3 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.



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