

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human (rh) MMP-14 in Western blots. In Western blots, no cross-reactivity with recombinant human (rh) MMP-1, -2, -7, -8, -9, -10, -12, -13 or the catalytic domains of rhMMP-15 and -16.
Source	Monoclonal Mouse IgG ₁ Clone # 5H2
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human MMP-14 synthetic peptide AYIREGHEKQA Accession # P50281
Formulation	Lyophilized from a 0.2 µm filtered solution in TBS 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.

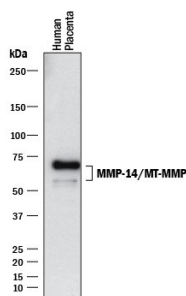
APPLICATIONS

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
Immunohistochemistry	8-25 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human MMP-14 (Catalog # 918-MP), see our available Western blot detection antibodies

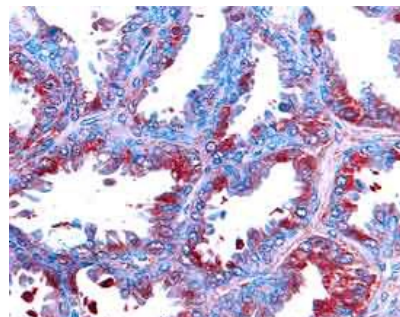
DATA

Western Blot



Detection of Human MMP-14/MT1-MMP by Western Blot. Western blot shows lysates of human placenta tissue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human MMP-14/MT1-MMP Monoclonal Antibody (Catalog # MAB918) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). Specific bands were detected for MMP-14/MT1-MMP at approximately 50 kDa and 62 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



MMP-14 in Human Benign Nodular Hyperplasia. MMP-14 was detected in immersion fixed paraffin-embedded sections of human benign nodular hyperplasia using 25 µg/mL Mouse Anti-Human MMP-14 Monoclonal Antibody (Catalog # MAB918) overnight at 4 °C. Tissue was stained with the Anti-Mouse HRP-AEC Cell & Tissue Staining Kit (red; Catalog # CTS003) 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. 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

As the first member of membrane type (MT) MMPs, MMP-14, also known as MT1-MMP, plays an important role in extracellular matrix (ECM) remodeling by being able to degrade type I collagen, activate pro-MMP-2 and process cell adhesion molecules such as CD44 and Integrin α_v (1). MMP-14 is therefore a key enzyme in many physiological and pathological processes such as angiogenesis and tumor invasion. Structurally, MMP-14 consists of the following domains: a pro domain containing the furin cleavage site, a catalytic domain containing the zinc-binding site, a hinge region, a hemopexin-like domain, a transmembrane domain, and a cytoplasmic tail (2).

References:

- Seike, M. (2003) Cancer Lett. **194**:1.
- Sato, H. *et al.* (1994) Nature **370**:61.