Human MMP-16/MT3-MMP Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1785

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MMP-16/MT3-MMP in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human MMP-16/MT3-MMP Ala32-Gly291 (Ile152Asn) Accession # P51512
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.

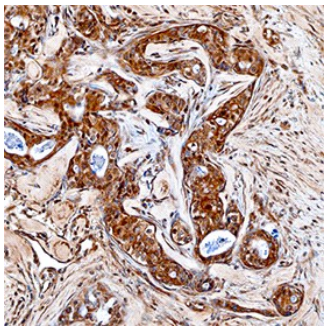
APPLICATIONS

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	0.1 µg/mL	Recombinant Human MMP-16/MT3-MMP (Catalog # 1785-MP)
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human MMP-16/MT3-MMP (Catalog # 1785-MP), see our available Western blot detection antibodies

DATA

Immunohistochemistry



MMP-16/MT3-MMP in Human Breast. MMP-16/MT3-MMP was detected in immersion fixed paraffin-embedded sections of human breast using Goat Anti-Human MMP-16/MT3-MMP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1785) 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 of epithelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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. *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

Matrix metalloproteinases (MMPs) are a family of zinc and calcium dependent endopeptidases with the combined ability to degrade all the components of the extracellular matrix (ECM). MMP-16 (MT3-MMP) is found in brain, lung, placenta, smooth muscle cells, and malignant tumor tissues including oral melanoma and renal carcinoma (1). MMP-16 has been shown to activate proMMP-2 and degrade various ECM components including native collagens (2, 3). MMP-16 has been proposed to possess the potential to directly enhance the growth and invasiveness of cells *in vivo*, two critical processes for development and carcinogenesis (4). Structurally, MMP-16 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 (1). The structure of the catalytic domain in complex with a hydroxamate inhibitor has been solved (5). The rhMMP-16PC consists of the pro and catalytic domains, which can be activated by treatment with furin.

References:

1. Takino, T. *et al.* (1995) J. Biol. Chem. **270**:23013.
2. Shofuda, K. *et al.* (1997) J. Biol. Chem. **272**:9749.
3. Shimada, T. *et al.* (1999) Eur. J. Biochem. **262**:907.
4. Kang, T. *et al.* (2000) FASEB J. **14**:2559.
5. Lang, R. *et al.* (2004) J. Mol. Biol. **336**:213.

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