Human MMP-16/MT3-MMP Antibody

Monoclonal Mouse IgG_{2A} Clone # 782005

Catalog Number: MAB1785

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MMP-16/MT3-MMP in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human MMP-14, -15, or -24 is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 782005
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human MMP-16/MT3-MMP Ala32-Pro535 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.

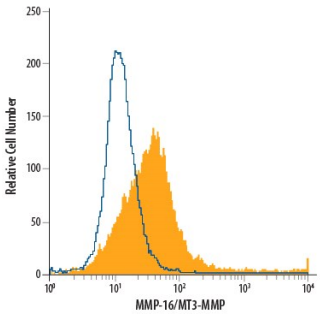
APPLICATIONS

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
Flow Cytometry	2.5 µg/10^6 cells	See Below

DATA

Flow Cytometry



Detection of MMP-16 in PC-3 Human Cell Line by Flow Cytometry. PC-3 human prostate cancer cell line was stained with Mouse Anti-Human MMP-16/MT3-MMP Monoclonal Antibody (Catalog # MAB1785, filled histogram) or isotype control antibody (Catalog # MAB003, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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 cytoplamasic tail (1). The structure of the catalytic domain in complex with a hydroxamate inhibitor has been solved (5).

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.