Human MMP-14/MT1-MMP Antibody

Monoclonal Mouse IgG_{2B} Clone # 128527

Catalog Number: MAB9181

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MMP-14/MT1-MMP in direct ELISAs and Western blots. Does not detect *E. coli*-expressed recombinant human MMP-14 catalytic domain (aa 112-284).
Source	Monoclonal Mouse IgG_{2B} Clone # 128527
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MMP−14/MT1−MMP Tyr112-Ala541 (predicted) Accession # P50281
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.

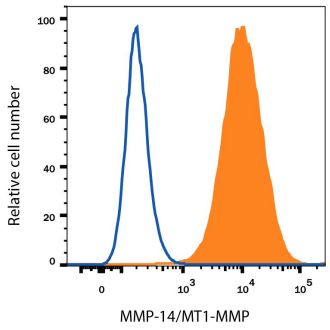
APPLICATIONS

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	1 µg/mL	Recombinant Human MMP−14 (Catalog # 918-MP)
Flow Cytometry	0.25 µg/10^6 cells	See Below
Immunohistochemistry	8-25 µg/mL	Immersion fixed paraffin-embedded sections of human kidney cancer tissue and prostate cancer tissue
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human MMP−14 (Catalog # 918−MP), see our available Western blot detection antibodies
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Flow Cytometry



Detection of MMP-14/MT1-MMP in MDA-MB-231 Human Cell Line by Flow Cytometry. MDA-MB-231 human breast cancer cell line was stained with Mouse Anti-Human MMP-14/MT1-MMP Monoclonal Antibody (Catalog # MAB9181, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B).

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:

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

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