

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
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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	0.25-1 µg/10 ⁶ cells	PC-3 human prostate cancer cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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).

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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