

DESCRIPTION

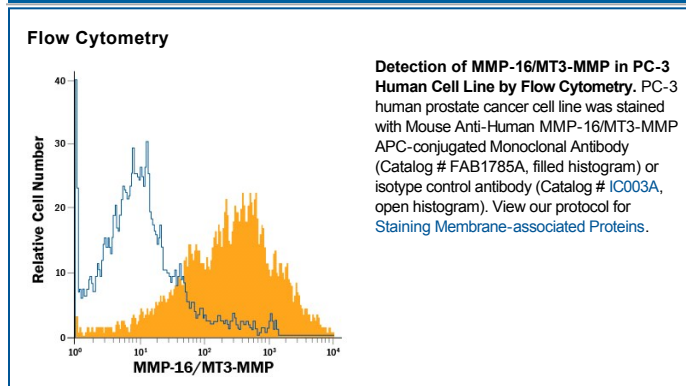
Species Reactivity	Human
Specificity	Detects human MMP-16/MT3-MMP in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human MMP-14, -15, or -24 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 782005
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human MMP-16/MT3-MMP Ala32-Pro535 Accession # P51512
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied 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	10 μ L/10 ⁶ cells	See Below

DATA



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 Metalloproteinase 16 (MMP-16), also known as MT3-MMP, is a 62-63 kDa member of the peptidase M10A family of enzymes (1,2). MMP-16 is found on capillary endothelial cells, cortical neurons cerebellar granule cells, granulosa lutein and theca lutein cells, and melanoma cells (3-6). MMP-16 has been shown to cleave proMMP-2 in a complex with chondroitin-4 sulfate (7). It also cleaves NgR1 and select matrix proteins (4). Notably, cleavage of MMP-14 inactivates this molecule, arresting cell migration (6). Structurally, proMMP-16 is 65-66 kDa in size and 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). There is one soluble 47-48 kDa splice variant that retains proteolytic activity. Over amino acids (aa) 32-535, human and mouse MMP-16 share 98% amino acid sequence identity.

References:

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3. Lozito, T.P. and R.S. Tuan (2012) *J. Cell. Physiol.* **227**:534.
4. Ferraro, G.B. *et al.* (2011) *J. Biol. Chem.* **286**:31418.
5. Puttabyatappa, M, *et al.* (2014) *Biol. Reprod.* **91**:1.
6. Tatti, O. *et al.* (2015) *Cancer Res.* **75**:2083.
7. Iida, J. *et al.* (2007) *Biochem. J.* **403**:533.
8. Shimada, T. *et al.* (1999) *Eur. J. Biochem.* **262**:907.
9. Matsumoto, S., *et al.* (1997) *Biochim. Biophys. Acta.* **1354**:159.