Human MFG-E8
Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 278918

Catalog Number: IC27671G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MFG-E8 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_{2A} Clone # 278918
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MFG-E8 Leu24-Cys387 Accession # Q08431
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

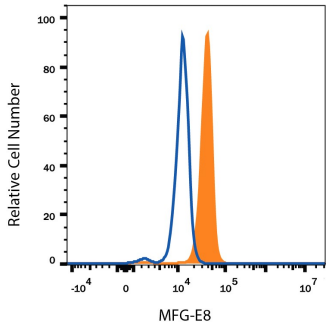
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	0.25-1 µg/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of MFG-E8 in Human Dendritic Cells by Flow Cytometry Human immature dendritic cells were stained with Mouse Anti-Human MFG-E8 Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # IC27671G, filled histogram) or isotype control antibody (Catalog # IC003G, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

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.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human MFG-E8
Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 278918

Catalog Number: IC27671G

100 µg

BACKGROUND

Milk Fat Globulin Protein E8 (MFG-E8), also known as Lactadherin, MP47, breast epithelial antigen BA46, and SED1, is a 66-75 kDa pleiotropic secreted glycoprotein that promotes mammary gland morphogenesis, angiogenesis, and tumor progression. MFG-E8 also plays an important role in tissue homeostasis and the prevention of inflammation (1). Human MGF-E8 contains one N-terminal EGF-like domain and two C-terminal F5/8-type discoidin-like domains (2). It shares 63% and 61% aa sequence identity with comparable regions of mouse and rat MFG-E8, respectively. Shorter isoforms of human MFG-E8 may have N-terminal deletions (beginning near the end of the first discoidin-like domain), internal deletions (lacking either the EGF-like domain or the central region of the second discoidin-like domain), or C-terminal deletions (truncated within the second discoidin-like domain) (3). A 50 aa internal proteolytic fragment of human MFG-E8 (known as Medin) is a major component of aortic medial amyloid deposits (4). MFG-E8 is released into the milk in complex with lipid-containing milk fat globules. It is also found in multiple other cell types including endothelial cells and smooth muscle cells of the vasculature, immature dendritic cells, at the acrosomal cap of testicular and epididymal sperm, and in epithelial cells of the endometrium (1). MFG-E8 binds to the Integrins αVβ3 and αVβ5 and potentiates the angiogenic action of VEGF through VEGF R2 (5, 6). It reduces inflammation and tissue damage in a variety of settings. MFG-E8 functions as a bridge between phosphatidylserine on apoptotic cells and Integrin αVβ3 on phagocytes, leading to the clearance of apoptotic debris (7). It mediates the engulfment of apoptotic bodies in atherosclerotic plaques and prion-infected brain (8, 9) and of apoptotic B cells during germinal center reactions (10, 11). MFG-E8 also promotes the removal of excess Collagen in fibrotic lungs and the regeneration of damaged intestinal epithelia (12, 13). Its tissue-protective role impairs anti-tumor immunity and chemotherapy-induced apoptosis (14). MFG-E8 in the breastmilk blocks rotavirus infection in nursing babies (15).

References:

1. Raymond, A. *et al.* (2009) J. Cell. Biochem. **106**:957.
2. Couto, J.R. *et al.* (1996) DNA Cell Biol. **15**:281.
3. Yamaguchi, H. *et al.* (2010) Eur. J. Immunol. **40**:1778.
4. Haggqvist, B. *et al.* (1999) Proc. Natl. Acad. Sci. USA **96**:8669.
5. Silvestre, J.-S. *et al.* (2005) Nat. Med. **11**:499.
6. Borges, E. *et al.* (2000) J. Biol. Chem. **275**:39867.
7. Hanayama, R. *et al.* (2002) Nature **417**:182.
8. Ait-Oufella, H. *et al.* (2007) Circulation **115**:2168.
9. Kranich, J. *et al.* (2010) J. Exp. Med. **207**:2271.
10. Hanayama, R. *et al.* (2004) Science **304**:1147.
11. Kranich, J. *et al.* (2010) J. Exp. Med. **205**:1293.
12. Atabai, K. *et al.* (2009) J. Clin. Invest. **119**:3713.
13. Bu, H.-F. *et al.* (2007) J. Clin. Invest. **117**:3673.
14. Jinushi, M. *et al.* (2009) J. Exp. Med. **206**:1317.
15. Kvistgaard, A.S. *et al.* (2004) J. Dairy Sci. **87**:4088.

PRODUCT SPECIFIC NOTICES

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449