

MFG-E8 (H-3): sc-377356

BACKGROUND

Human milk-fat globule (MFG) is abundant in human breast milk and is composed of secreted lipids encapsulated by plasma membranes from the epithelial cells of mammary glands. MFG membranes are composed of various glycoproteins that serve as markers for differentiated carcinomas. MFG-E8 (milk fat globule-EGF factor 8), also known as Lactadherin or BA46, is a 387 amino acid peripheral membrane protein that localizes to the membrane of a variety of tissues, including mammary epithelial surfaces, and contains one EGF-like domain and two F5/8 type C domains. Functioning as a specific ligand for Integrin $\beta 5$ and Integrin $\beta 3$, MFG-E8 is thought to be involved in gamete interactions and cell attachment, possibly playing a role in fertilization and apoptosis. Additionally, MFG-E8 binds to rotavirus and inhibits its replication, thereby protecting the cell from viral infection. Over-expression of MFG-E8 is associated with breast cancer, suggesting that MFG-E8 may be related to tumorigenesis.

CHROMOSOMAL LOCATION

Genetic locus: *Mfge8* (mouse) mapping to 7 D3.

SOURCE

MFG-E8 (H-3) is a mouse monoclonal antibody raised against amino acids 56-190 mapping near the N-terminus of MFG-E8 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MFG-E8 (H-3) is available conjugated to agarose (sc-377356 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377356 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377356 PE), fluorescein (sc-377356 FITC), Alexa Fluor[®] 488 (sc-377356 AF488), Alexa Fluor[®] 546 (sc-377356 AF546), Alexa Fluor[®] 594 (sc-377356 AF594) or Alexa Fluor[®] 647 (sc-377356 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-377356 AF680) or Alexa Fluor[®] 790 (sc-377356 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

MFG-E8 (H-3) is recommended for detection of MFG-E8 of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MFG-E8 siRNA (m): sc-43159, MFG-E8 shRNA Plasmid (m): sc-43159-SH and MFG-E8 shRNA (m) Lentiviral Particles: sc-43159-V.

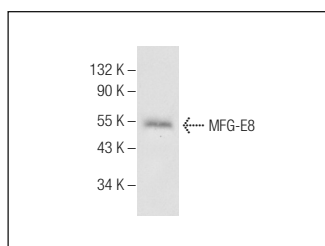
Molecular Weight of MFG-E8: 46 kDa.

Positive Controls: CSMLO whole cell lysate: sc-364369.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



MFG-E8 (H-3): sc-377356. Western blot analysis of MFG-E8 expression in CSMLO whole cell lysate.

SELECT PRODUCT CITATIONS

- Kim, J.Y., et al. 2013. Noncanonical autophagy promotes the visual cycle. *Cell* 154: 365-376.
- Cai, X., et al. 2021. Propofol suppresses microglial phagocytosis through the downregulation of MFG-E8. *J. Neuroinflammation* 18: 18.
- Chioccarelli, T., et al. 2021. FUS driven circCNOT6L biogenesis in mouse and human spermatozoa supports zygote development. *Cell. Mol. Life Sci.* 79: 50.
- Huang, Q., et al. 2023. Progranulin deficiency suppresses allergic asthma and enhances efferocytosis via PPAR- γ /MFG-E8 regulation in macrophages. *Immun. Inflamm. Dis.* 11: e779.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.