

# Human MFG-E8 / lactadherin / MFGE8 Protein (His & AVI Tag), Biotinylated

Catalog Number: 10853-H27B-B



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## General Information

### Gene Name Synonym:

BA46; EDIL1; HMFG; hP47; HsT19888; MFG-E8; MFGM; OAcGD3S; SED1; SPAG10

### Protein Construction:

A DNA sequence encoding the human MFGE8 (Q08431.2) (Met1-Cys387) was expressed with a c-terminal polyhistidine tagged AVI tag at the C-terminus. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed.

**Source:** Human

**Expression Host:** Baculovirus-Insect Cells

## QC Testing

### Biotin/Protein Ratio:

0.7-1 as determined by the HABA assay.

**Purity:** > 95 % as determined by SDS-PAGE.

### Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Leu 24

### Molecular Mass:

The recombinant human MFGE8 consists of 390 amino acids and predicts a molecular mass of 44.1 kDa.

### Formulation:

Lyophilized from sterile 20 mM Tris, 150 mM NaCl, pH 8.5, 10 % glycerol, 0.2 M Arginine, 0.01 % Tween-20.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

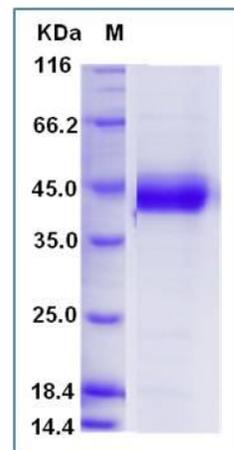
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

MFG-E8, also known as lactadherin and MFGE8, contains 1 EGF-like domain and 2 F5/8 type C domains. It also contains a phosphatidylserine (PS) binding domain, as well as an Arginine-Glycine-Aspartic acid motif, which enables the binding to integrins. It binds PS, which is exposed on the surface of apoptotic cells. MFG-E8 is expressed in mammary epithelial cell surfaces and aortic media. Overexpression of MFG-E8 can be found in several carcinomas. MFG-E8 has an opsonization of the apoptotic cells and binding to integrins on the surface of phagocytic cells. It also mediates the engulfment of the dead cell. MFG-E8 plays an important role in the maintenance of intestinal epithelial homeostasis and the promotion of mucosal healing. It promotes VEGF-dependent neovascularization and contributes to phagocytic removal of apoptotic cells in many tissues. It also binds to phosphatidylserine-enriched cell surfaces in a receptor-independent manner.

## References

- 1.Oshima K, *et al.* (2002) Secretion of a peripheral membrane protein, MFG-E8, as a complex with membrane vesicles. *Eur J Biochem.* 269(4):1209-18.
- 2.Hanayama R, *et al.* (2002) Identification of a factor that links apoptotic cells to phagocytes. *Nature.* 417 (6885):182-7.
- 3.Strausberg RL, *et al.* (2003) Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc Natl Acad Sci.* 99(26):16899-903.

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