# Data Sheet (Cat.No.TMPY-02836)

TargetMol

## MFGE8 Protein, Human, Recombinant (His)

### General Information

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| Synonyms: | SPAG10;HMFG;milk fat globule-EGF factor 8 protein;hP47;BA46;SED1;MFGM;MFG-E8;HsT19888;EDIL1;OAcGD3S |
| Protein Construction: | A DNA sequence encoding the human MFGE8 isoform 1 (Q08431-1) (Met 1-Cys 387) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 24 |
| Species: | Human |
| Expression Host: | Baculovirus Insect Cells |
| Accession: | Q08431-1 |
| Molecular Weight: | 42 kDa (predicted); 45 kDa (reducing conditions) |

### QC Testing

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| Biological Activity: | When 5 x 10E4 cells/well are added to Recombinant Human MFG-E8 coated plates (12.5 μg/mL, 100 μL/well), 45-85% cells will adhere after 1 hour at 37℃. |
| Purity: | ≥ 80 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC. |
| Endotoxin: | < 1.0 EU/μg of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, pH 7.4, 10% gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization. |

### Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

MFG-E8, also known as lactadherin and MFGE8, contains 1 EGF-like domain and 2 F5/8 type C domains. It also contains 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 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 the phagocytic removal of apoptotic cells in many tissues. It also binds to phosphatidylserine-enriched cell surfaces in a receptor-independent manner.

Reference

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.

HAnayama R,et al. (2002) Identification of a factor that links apoptotic cells to phagocytes. Nature. 417 (6885):182-7.

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.