

APB286Mu01 100µg
Active Milk Fat Globule EGF Factor 8 (MFGE8)
Organism Species: *Mus musculus* (Mouse)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ile159~Ser417

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 8.3

Predicted Molecular Mass: 30.3kDa

Accurate Molecular Mass: 30kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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IA DSQISASSVY MGFMLQRWG PELARLYRTG IVNAWTASNY
DSKPWIQVNL LRKMRVSGVM TQGASRAGRA EYLKTFKVAY SLDGRKFEFI
QDESGGDKEF LGNLDNNSLK VNMFNPTLEA QYIKLYPVSC HRGCTLRFEL
LGCELHGCSE PLGLKNNTIP DSQMSASSY KTWNLRAFGW YPHLGRLDNQ
GKINAWTAQS NSAKEWLQVD LGTQRQVTGI ITQGARDFGH IQYVASYKVA
HSDDGVQWTV YEEQGSS
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[ACTIVITY]

Milk Fat Globule EGF Factor 8 (MFGE8), also known as lactadherin, is a secreted glycoprotein containing EGF-like and coagulation factor C homology (C1/C2) domains. It mediates critical roles in apoptotic cell clearance (efferocytosis), tissue remodeling, angiogenesis, and immune regulation by binding integrin receptors (e.g., $\alpha v \beta 3 / \beta 5$). MFGE8 facilitates phagocytosis of apoptotic cells via bridging phosphatidylserine on dying cells to phagocytes. It also modulates TGF- β activation and inflammatory responses. Expressed in macrophages, epithelial cells, and mammary glands, MFGE8 is implicated in atherosclerosis, autoimmune diseases, and cancer progression. Its dysfunction correlates with impaired tissue repair and aberrant immune activation. Besides, EGF has been identified as an interactor of MFGE8, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse MFGE8 and recombinant human EGF. Briefly, MFGE8 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to EGF-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-MFGE8 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5

times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C . Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant mouse MFGE8 and recombinant human EGF was shown in Figure 1, the EC₅₀ for this effect is 0.043ug/mL.

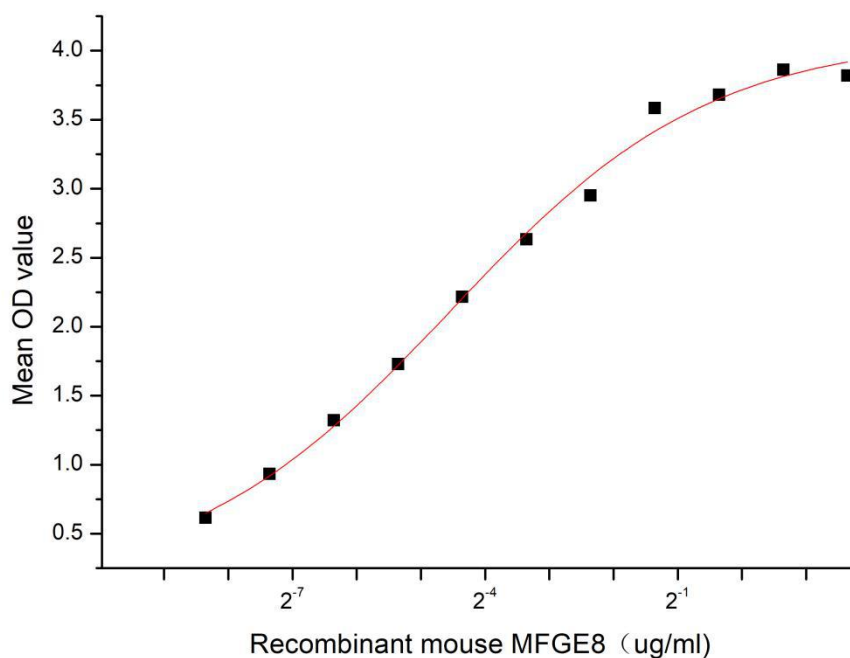
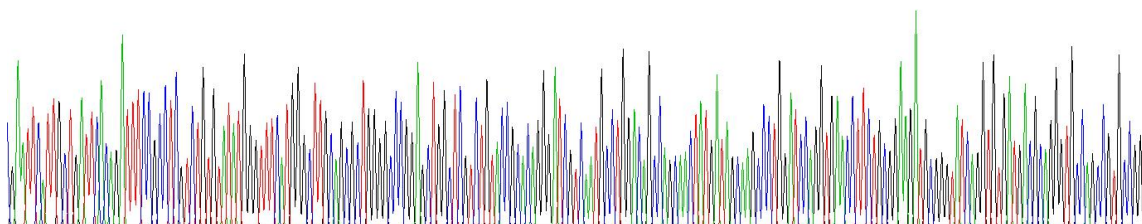


Figure 1. The binding activity of recombinant mouse MFGE8 and recombinant human EGF



— *Journal of the American Medical Association*, 1997

