SANTA CRUZ BIOTECHNOLOGY, INC.

# MDGI (67D3): sc-58275

## BACKGROUND

FFatty acid-binding proteins, designated FABPs, are a family of homologous cytoplasmic proteins that are expressed in a highly tissue-specific manner and play an integral role in the balance between lipid and carbohydrate metabolism. FABPs mediate fatty acid (FA) and/or hydrophobic ligand uptake, transport and targeting within their respective tissues. The mechanisms underlying these actions can give rise to both passive diffusional uptake and protein-mediated transmembrane transport of FAs. FABPs are expressed in adipocytes (A-FABP), brain (B-FABP), epidermis (E-FABP, also designated psoriasis-associated FABP or PA-FABP), muscle and heart (H-FABP, also designated mammary-derived growth inhibitor or MDGI), intestine (I-FABP), liver (L-FABP), myelin (M-FABP) and testis (T-FABP). MDGI is highly expressed in the myocardium, skeletal and smooth muscle fibers, lipid and/or steroid synthesizing cells and terminally differentiated epithelia of the respiratory, intestinal and urogenital tracts.

## CHROMOSOMAL LOCATION

Genetic locus: FABP3 (human) mapping to 1p35.2; Fabp3 (mouse) mapping to 4 D2.2.

## SOURCE

MDGI (67D3) is a mouse monoclonal antibody raised against native full length MDGI of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

MDGI (67D3) is recommended for detection of MDGI of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with I-FABP or L-FABP of human origin.

Suitable for use as control antibody for MDGI siRNA (h): sc-41245, MDGI siRNA (m): sc-41246, MDGI shRNA Plasmid (h): sc-41245-SH, MDGI shRNA Plasmid (m): sc-41246-SH, MDGI shRNA (h) Lentiviral Particles: sc-41245-V and MDGI shRNA (m) Lentiviral Particles: sc-41246-V.

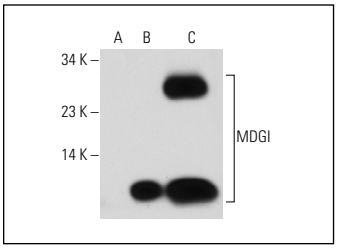
Molecular Weight of MDGI: 15 kDa.

Positive Controls: MDGI (m): 293T Lysate: sc-125591 or mouse heart extract: sc-2254.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA




MDGI (67D3): sc-58275. Western blot analysis of MDGI expression in non-transfected: sc-117752 (**A**) and mouse MDGI transfected: sc-125591 (**B**) 293T whole cell lysates and mouse heart tissue extract (**C**).

## SELECT PRODUCT CITATIONS


1. Mason, S.B., et al. 2011. Differential expression of renal proteins in a rodent model of meckel syndrome. Nephron Exp. Nephrol. 117: e31-e38.
2. Wang, F., et al. 2015. Proteomic analysis of mouse soleus muscles affected by hindlimb unloading and reloading. Muscle Nerve 52: 803-811.
3. Martin, G.G., et al. 2016. Female mice are resistant to fabp1 gene ablation-induced alterations in brain endocannabinoid levels. Lipids 51: 1007-1020.
4. Martin, G.G., et al. 2016. FABP-1 gene ablation impacts brain endocannabinoid system in male mice. J. Neurochem. 138: 407-422.
5. Cypryk, W., et al. 2017. Proteomic and bioinformatic characterization of extracellular vesicles released from human macrophages upon influenza A virus infection. J. Proteome Res. 16: 217-227.
6. Martin, G.G., et al. 2017. Fabp1 gene ablation inhibits high-fat diet-induced increase in brain endocannabinoids. J. Neurochem. 140: 294-306.
7. Martin, G.G., et al. 2019. Sterol carrier protein-2/sterol carrier protein-x/fatty acid binding protein-1 ablation impacts response of brain endocannabinoid to high-fat diet. Lipids 54: 583-601.


## RESEARCH USE

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