SANTA CRUZ BIOTECHNOLOGY, INC.

E-FABP (A-9): sc-365236

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fatty 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). Epithelial fatty acid-binding protein (E-FABP) binds stearic acid and may play a role in keratinocyte differentiation. E-FABP is upregulated in rat dorsal root ganglia after sciatic nerve crush and in differentiating neurons during development.

CHROMOSOMAL LOCATION

Genetic locus: FABP5 (human) mapping to 8q21.13; Fabp5 (mouse) mapping to 3 A1.

SOURCE

E-FABP (A-9) is a mouse monoclonal antibody raised against amino acids 29-73 mapping within an internal region of E-FABP 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.

E-FABP (A-9) is available conjugated to agarose (sc-365236 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365236 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365236 PE), fluorescein (sc-365236 FITC), Alexa Fluor® 488 (sc-365236 AF488), Alexa Fluor® 546 (sc-365236 AF546), Alexa Fluor® 594 (sc-365236 AF594) or Alexa Fluor® 647 (sc-365236 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365236 AF680) or Alexa Fluor® 790 (sc-365236 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

E-FABP (A-9) is recommended for detection of E-FABP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for E-FABP siRNA (h): sc-41237, E-FABP siRNA (m): sc-41238, E-FABP shRNA Plasmid (h): sc-41237-SH, E-FABP shRNA Plasmid (m): sc-41238-SH, E-FABP shRNA (h) Lentiviral Particles: sc-41237-V and E-FABP shRNA (m) Lentiviral Particles: sc-41238-V.

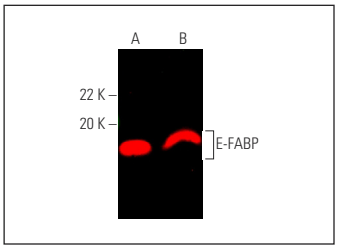
Molecular Weight of E-FABP: 15 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270 or A-375 cell lysate: sc-3811.

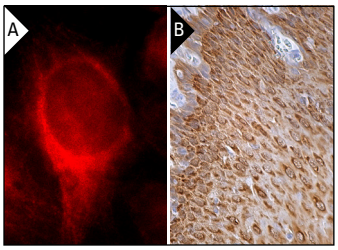
RECOMMENDED SUPPORT REAGENTS

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



E-FABP (A-9): sc-365236. Near-infrared western blot analysis of E-FABP expression in HEL 92.1.7 (**A**) and A-375 (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



E-FABP (A-9): sc-365236. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic and nuclear staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Park, I.S., et al. 2019. Decursin and decursinol angelate suppress adipogenesis through activation of β-catenin signaling pathway in human visceral adipose-derived stem cells. Nutrients 12: 13.
2. Di Giorgio, E., et al. 2020. Mef2d sustains activation of effector Foxp3$^+$ tregs during transplant survival and anticancer immunity. J. Clin. Invest. 130: 6242-6260.
3. Giorgio, E.D., et al. 2021. A regulative epigenetic circuit supervised by HDAC7 represses IGFBP6 and IGFBP7 expression to sustain mammary stemness. Epigenomics 13: 683-698.
4. Fukuda, M., et al. 2022. Resveratrol inhibits proliferation and induces autophagy by blocking SREBP1 expression in oral cancer cells. Molecules 27: 8250.

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.