SANTA CRUZ BIOTECHNOLOGY, INC.

E-FABP (C-20): sc-16060

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.

REFERENCES

1. Veerkamp, J.H. and Maatman, R.G. 1995. Cytoplasmic fatty acid-binding proteins: their structure and genes. Prog. Lipid Res. 34: 17-52.
2. Hotamisligil, G.S., et al. 1996. Uncoupling of obesity from Insulin resistance through a targeted mutation in aP2, the adipocyte fatty acid binding protein. Science 274: 1377-1379.
3. Storch, J. and Thumser, A.E. 2000. The fatty acid transport function of fatty acid-binding proteins. Biochim. Biophys. Acta 1486: 28-44.
4. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 600434. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Glatz, J.F. and Storch, J. 2001. Unravelling the significance of cellular fatty acid-binding proteins. Curr. Opin. Lipidol. 12: 267-274.

CHROMOSOMAL LOCATION

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

SOURCE

E-FABP (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of E-FABP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16060 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

E-FABP (C-20) is recommended for detection of E-FABP of human and, to a lesser extent, mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

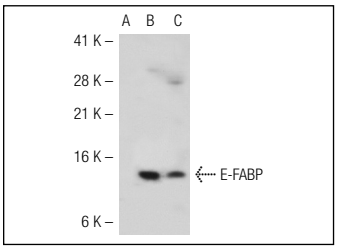
E-FABP (C-20) is also recommended for detection of E-FABP in additional species, including equine, canine, bovine and porcine.

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: E-FABP (h): 293T Lysate: sc-113029 or HEL 92.1.7 cell lysate: sc-2270.

DATA



E-FABP (C-20): sc-16060. Western blot analysis of E-FABP expression in non-transfected 293T: sc-117752 (**A**), human E-FABP transfected 293T: sc-113029 (**B**) and HEL 92.1.7 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Berglund, S.R., et al. 2009. Proteomic analysis of low dose arsenic and ionizing radiation exposure on keratinocytes. Proteomics 9: 1925-1938.
2. Pérez-Pérez, R., et al. 2009. Differential proteomics of omental and subcutaneous adipose tissue reflects their unalike biochemical and metabolic properties. J. Proteome Res. 8: 1682-1693.
3. Pérez-Pérez, R., et al. 2012. Attenuated metabolism is a hallmark of obesity as revealed by comparative proteomic analysis of human omental adipose tissue. J. Proteomics 75: 783-795.

RESEARCH USE

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