SANTA CRUZ BIOTECHNOLOGY, INC.

EBP1 (C-11): sc-393114

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

EBP1 (ErbB3-binding protein 1), also known as PA2G4 (proliferation-associated 2G4), p38-2G4 or HG4-1, is a member of the peptidase M24C family and functions as an RNA-binding protein involved in cellular proliferation and differentiation processes. It is expressed in a variety of cell lines, including a wide range of tumor cell lines, and localizes to the cytoplasm. Upon treatment with neuregulin-1 (heregulin), EBP1 translocates to the nucleus. EBP1 is a component of pre-ribosomal ribonucleoprotein complexes, participating in ribosome assembly and regulating the later steps of rRNA processing. In addition, EBP1 interacts with ErbB-3 and may function as a modulator of the ErbB-3-mediated signal transduction pathway by regulating the effects of neuregulin-1 (heregulin). EBP1 also associates with histone deacetylases (HDACs), functioning as a transcriptional co-repressor of cell cycle regulatory genes.

REFERENCES

1. Zhang, Y., et al. 2005. The ErbB3 binding protein EBP1 interacts with Sin3A to repress E2F1 and AR-mediated transcription. Nucleic Acids Res. 33: 6024-6033.
2. Squatrito, M., et al. 2006. EBP1 is a dsRNA-binding protein associated with ribosomes that modulates eIF2α phosphorylation. Biochem. Biophys. Res. Commun. 344: 859-868.
3. Bose, S.K., et al. 2006. Identification of EBP1 as a component of cytoplasmic Bcl-2 mRNP (messenger ribonucleoprotein particle) complexes. Biochem. J. 396: 99-107.
4. Kowalinski, E., et al. 2007. Expression, purification, crystallization and preliminary crystallographic analysis of the proliferation-associated protein Ebp1. Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 63: 768-770.

CHROMOSOMAL LOCATION

Genetic locus: PA2G4 (human) mapping to 12q13.2; Pa2g4 (mouse) mapping to 10 D3.

SOURCE

EBP1 (C-11) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of EBP1 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.

EBP1 (C-11) is available conjugated to agarose (sc-393114 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393114 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393114 PE), fluorescein (sc-393114 FITC), Alexa Fluor® 488 (sc-393114 AF488), Alexa Fluor® 546 (sc-393114 AF546), Alexa Fluor® 594 (sc-393114 AF594) or Alexa Fluor® 647 (sc-393114 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393114 AF680) or Alexa Fluor® 790 (sc-393114 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EBP1 (C-11) is recommended for detection of EBP1 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).

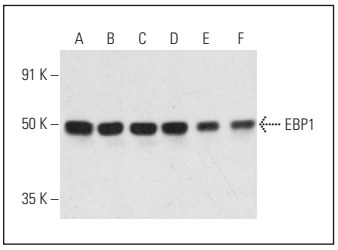
EBP1 (C-11) is also recommended for detection of EBP1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for EBP1 siRNA (h): sc-77220, EBP1 siRNA (m): sc-77221, EBP1 shRNA Plasmid (h): sc-77220-SH, EBP1 shRNA Plasmid (m): sc-77221-SH, EBP1 shRNA (h) Lentiviral Particles: sc-77220-V and EBP1 shRNA (m) Lentiviral Particles: sc-77221-V.

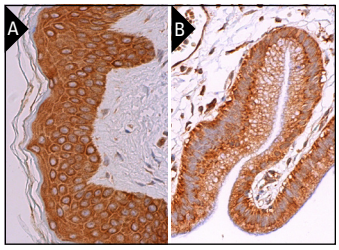
Molecular Weight of EBP1: 47 kDa.

Positive Controls: A549 cell lysate: sc-2413, MCF7 whole cell lysate: sc-2206 or Sol8 cell lysate: sc-2249.

DATA



EBP1 (C-11): sc-393114. Western blot analysis of EBP1 expression in A549 (**A**), MCF7 (**B**), RAW 264.7 (**C**), Sol8 (**D**), PC-12 (**E**) and C6 (**F**) whole cell lysates.



EBP1 (C-11): sc-393114. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, Langerhans cells and melanocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Bui, P.L., et al. 2019. Template activating factor-I α regulates retroviral silencing during reprogramming. Cell Rep. 29: 1909-1922.e6.
2. Wu, J.Y., et al. 2019. YC-1 antagonizes Wnt/β-catenin signaling through the EBP1 p42 isoform in hepatocellular carcinoma. Cancers 11: 661.
3. Zhou, Y., et al. 2021. HER2-intronic miR-4728-5p facilitates HER2 expression and accelerates cell proliferation and migration by targeting EBP1 in breast cancer. PLoS ONE 16: e0245832.

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.