SANTA CRUZ BIOTECHNOLOGY, INC.

EFP (2): sc-135893

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

EFP (estrogen-responsive finger protein) is a transcription factor, the content of which is regulated by estrogen. It has been identified as a member of the RING-finger family, a family of proteins containing a Zn^{2+} binding domain designated the C_3HC_4 or RING finger. EFP also contains two B box domains and a coiled-coil region (a transactivation domain), which are characteristic of a subgroup of the RING-finger family. Estrogen regulates the growth, differentiation and function of target cells in a variety of tissues; however, few genes have been shown to be directly regulated by estrogen. It has been speculated that EFP may mediate estrogen activity in a signaling cascade in which estrogen-ER binding to the estrogen responsive element (ERE) downstream of the EFP gene upregulates EFP gene expression. The EFP gene product may then activate transcription of secondary estrogen responsive genes. Additional studies indicate that the EFP promoter may be regulated by multiple elements and their interacting factors.

REFERENCES

1. Evans, R.M. 1988. The steroid and thyroid hormone receptor superfamily. Science 240: 889-895.
2. Green, S., et al. 1988. Nuclear receptors enhance our understanding of transcription regulation. Trends Genet. 4: 309-314.3.
3. Inoue, S., et al. 1993. Genomic binding-site cloning reveals an estrogen-responsive gene that encodes a RING-finger protein. Proc. Natl. Acad. Sci. USA 90: 11117-11121.
4. Orimo, A., et al. 1995. Molecular cloning, structure, and expression of mouse estrogen-responsive finger protein EFP. Co-localization with estrogen receptor mRNA in target organs. J. Biol. Chem. 270: 24406-24013.
5. Borden, K.L., et al. 1995. The solution structure of the RING-finger domain from the acute promyelocytic leukaemia proto-oncoprotein PML. EMBO J. 14: 1532-1541.
6. Ikeda, K., et al. 1997. Multiple regulatory elements and binding proteins of the 5'-flanking region of the human estrogen-responsive finger protein (EFP) gene. Biochem. Biophys. Res. Commun. 236: 765-771.
7. Urano, T., et al. 2002. EFP targets 14-3-3 s for proteolysis and promotes breast tumour growth. Nature 417: 871-875.
8. Nakasato, N., et al. 2006. A ubiquitin E3 ligase EFP is up-regulated by interferons and conjugated with ISG15. Biochem. Biophys. Res. Commun. 351: 540-546.
9. Nakajima, A., et al. 2007. Ligand-dependent transcription of estrogen receptor a is mediated by the ubiquitin ligase EFP. Biochem. Biophys. Res. Commun. 357: 245-251.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: TRIM25 (human) mapping to 17q22.

SOURCE

EFP (2) is a mouse monoclonal antibody raised against amino acids 32-210 of EFP of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

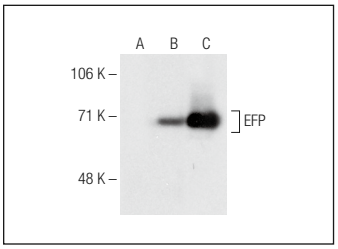
EFP (2) is recommended for detection of EFP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for EFP siRNA (h): sc-37825, EFP shRNA Plasmid (h): sc-37825-SH and EFP shRNA (h) Lentiviral Particles: sc-37825-V.

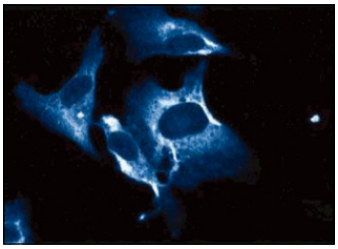
Molecular Weight of EFP: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, C32 nuclear extract: sc-2136 or EFP (h3): 293T Lysate: sc-158471.

DATA



EFP (2): sc-135893. Western blot analysis of EFP expression in non-transfected: sc-117752 (**A**) and human EFP transfected: sc-158471 (**B**) 293T whole cell lysates and C32 nuclear extract (**C**).



EFP (2): sc-135893. Immunofluorescence staining of human endothelial cells showing cytoplasmic localization.

RESEARCH USE

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