SANTA CRUZ BIOTECHNOLOGY, INC.

EBF2 (S-23): sc-133528

BACKGROUND

Early B cell factor 2 (EBF2), also known as transcription factor COE2, is a 575 amino acid protein belonging to the COE family of proteins, whose members are all helix-loop-helix transcription factors. EBF2 is a transcription factor which, in synergy with the Wnt-responsive LEF-1/CTNNB1 pathway, activates the decoy receptor for RANKL, OPG, in osteoblasts. OPG, in turn, regulates osteoclast differentiation. Lack of EBF2 has been found to cause a small defect in the terminal differentiation of osteoblasts, along with reduced bone mass and an increase in osteoclasts. Localized to the nucleus, EBF2 forms a homodimer or a heterodimer with a related family member.

REFERENCES

1. Wang, S.S., Tsai, R.Y. and Reed, R.R. 1997. The characterization of the OLF1/EBF-like HLH transcription factor family: implications in olfactory gene regulation and neuronal development. J. Neurosci. 17: 4149-4158.
2. Tsai, R.Y. and Reed, R.R. 1997. Cloning and functional characterization of Roaz, a zinc-finger protein that interacts with O/E-1 to regulate gene expression: implications for olfactory neuronal development. J. Neurosci. 17: 4159-4169.
3. Wang, S.S., Betz, A.G. and Reed, R.R. 2002. Cloning of a novel OLF1/EBF-like gene, O/E-4, by degenerate oligo-based direct selection. Mol. Cell. Neurosci. 20: 404-414.
4. Kieslinger, M., Folberth, S., Dobreva, G., Dorn, T., Croci, L., Erben, R., Consalez, G.G. and Grosschedl, R. 2005. EBF2 regulates osteoblast-dependent differentiation of osteoclasts. Dev. Cell 9: 757-767.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609934. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: EBF2 (human) mapping to 8p21.2; Ebf2 (mouse) mapping to 14 D1.

SOURCE

EBF2 (S-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic EBF2 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

EBF2 (S-23) is recommended for detection of EBF2 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for EBF2 siRNA (h): sc-155997, EBF2 siRNA (m): sc-143278, EBF2 shRNA Plasmid (h): sc-155997-SH, EBF2 shRNA Plasmid (m): sc-143278-SH, EBF2 shRNA (h) Lentiviral Particles: sc-155997-V and EBF2 shRNA (m) Lentiviral Particles: sc-143278-V.

Molecular Weight of EBF2: 62 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

RESEARCH USE

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