

EBF (H-300): sc-33552

BACKGROUND

B lymphocyte maturation is an intricate process that requires a distinct set of transcription factors with respect to the stage of cell differentiation and cell lineage. Among the transcriptional regulators involved in the early stages of B cell development, early B cell factor (EBF), also designated olfactory neuronal transcription factor 1 (OLF1), targets promoter elements for B lymphoid kinase (Blk) and genes encoding portions of the early stage B cell receptors (BCR), which are necessary for initiation of Ig light chain gene recombination and Src kinase (Blk) signaling. EBF is a basic helix-loop-helix (bHLH) homodimeric transcription factor composed of two subunits that interact with the core DNA sequence, CCCNNGGG, through a DNA recognition domain containing a zinc-coordination motif. Promoter elements to certain neuron-specific genes encoding olfactory-related proteins have been shown to contain EBF binding sites.

REFERENCES

1. Wang, M.M., et al. 1993. Molecular cloning of the olfactory neuronal transcription factor OLF1 by genetic selection in yeast. *Nature* 364: 121-126.
2. Hagman, J., et al. 1995. EBF contains a novel zinc-coordination motif and multiple dimerization and transcriptional activation domains. *EMBO J.* 14: 2907-2916.
3. Lin, H., et al. 1995. Failure of B cell differentiation in mice lacking the transcription factor EBF. *Nature* 376: 263-267.
4. Sigvardsson, M., et al. 1997. EBF and E47 collaborate to induce expression of the endogenous immunoglobulin surrogate light chain genes. *Immunity* 7: 25-36.
5. Akerblad, P., et al. 1999. Early B cell factor is an activator of the B lymphoid kinase promoter in early B cell development. *J. Immunol.* 163: 5453-5461.

SOURCE

EBF (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of EBF 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.

APPLICATIONS

EBF (H-300) is recommended for detection of EBF1-4 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)], 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).

EBF (H-300) is also recommended for detection of EBF1-4 in additional species, including equine, canine, bovine, porcine and avian.

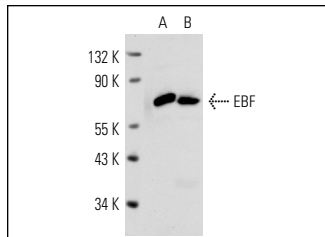
Molecular Weight of EBF: 80 kDa.

Positive Controls: A549 cell lysate: sc-2413, Ramos nuclear extract: sc-2153 or EBF1 (h2): 293T Lysate: sc-115802.

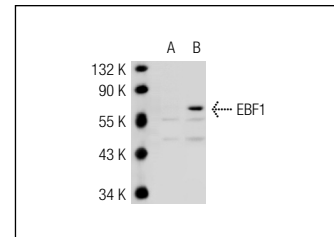
RECOMMENDED SECONDARY REAGENTS

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



EBF (H-300): sc-33552. Western blot analysis of EBF expression in human PBL (A) and A549 (B) whole cell lysates.



EBF (H-300): sc-33552. Western blot analysis of EBF1 expression in non-transfected: sc-117752 (A) and human EBF1 transfected: sc-115802 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wei, Y., et al. 2010. Identification and characterization of the promoter of human ATF5 gene. *J. Biochem.* 148: 171-178.
2. Zwollo, P., et al. 2010. Comparative analyses of B cell populations in trout kidney and mouse bone marrow: establishing "B cell signatures". *Dev. Comp. Immunol.* 34: 1291-1299.

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.

PROTOCOLS

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



Try **EBF (C-8): sc-137065** or **EBF (D-8): sc-137039**, our highly recommended monoclonal alternatives to EBF (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **EBF (C-8): sc-137065**.