

EBF3 (N7Q): sc-81999

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 3 (EBF3) 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. EBF3 is a nuclear transcription factor that is highly expressed in brain and exists as either a homodimer or a heterodimer with related family members. Specifically, EBF3 exhibits transcriptional activation activity on target genes by interacting with the core DNA sequence, CCCNNGGG, through a DNA-recognition domain containing a zinc-coordination motif. Two isoforms of EBF3 exist due to alternative splicing events.

REFERENCES

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2. Lin, H., et al. 1995. Failure of B cell differentiation in mice lacking the transcription factor EBF. *Nature* 376: 263-267.
3. Hagman, J., et al. 1995. EBF contains a novel zinc-coordination motif and multiple dimerization and transcriptional activation domains. *EMBO J.* 14: 2907-2916.
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. The B29 (immunoglobulin β -chain) gene is a genetic target for early B cell factor. *Mol. Cell. Biol.* 19: 392-401.
6. 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.
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CHROMOSOMAL LOCATION

Genetic locus: EBF3 (human) mapping to 10q26.3; Ebf3 (mouse) mapping to 7 F4.

SOURCE

EBF3 (N7Q) is a mouse monoclonal antibody raised against recombinant EBF3 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

EBF3 (N7Q) is recommended for detection of early B-cell factor 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 EBF3 siRNA (h): sc-43743, EBF3 siRNA (m): sc-45938, EBF3 shRNA Plasmid (h): sc-43743-SH, EBF3 shRNA Plasmid (m): sc-45938-SH, EBF3 shRNA (h) Lentiviral Particles: sc-43743-V and EBF3 shRNA (m) Lentiviral Particles: sc-45938-V.

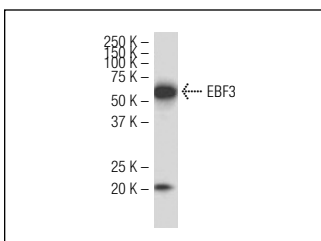
Molecular Weight of EBF3: 65 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

DATA



EBF3 (N7Q): sc-81999. Western blot analysis of EBF3 expression in IMR-32 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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



See **EBF (C-8): sc-137065** for EBF antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.