

# EBF (C-8): sc-137065

## 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 (Btk) 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.

## SOURCE

EBF (C-8) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of EBF of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EBF (C-8) is available conjugated to agarose (sc-137065 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137065 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137065 PE), fluorescein (sc-137065 FITC), Alexa Fluor® 488 (sc-137065 AF488), Alexa Fluor® 546 (sc-137065 AF546), Alexa Fluor® 594 (sc-137065 AF594) or Alexa Fluor® 647 (sc-137065 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137065 AF680) or Alexa Fluor® 790 (sc-137065 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## 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.

## APPLICATIONS

EBF (C-8) is recommended for detection of EBF1, EBF2, EBF3 and EBF4 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).

EBF (C-8) is also recommended for detection of EBF1, EBF2, EBF3 and EBF4 in additional species, including equine, canine, bovine and porcine.

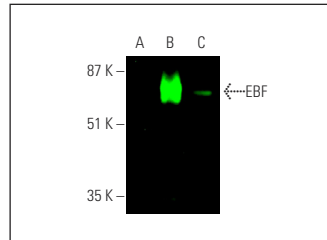
Molecular Weight of EBF: 80 kDa.

Positive Controls: Ramos nuclear extract: sc-2153, IMR-32 cell lysate: sc-2409 or EBF1 (h4): 293T Lysate: sc-177162.

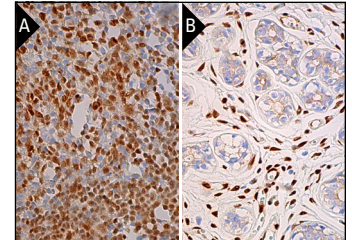
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



EBF (C-8): sc-137065. Near-infrared western blot analysis of EBF expression in non-transfected 293T: sc-117752 (A), human EBF1 transfected 293T: sc-177162 (B) and IMR-32 (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



EBF (C-8): sc-137065. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal center and cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nuclear staining of interstitial cells (B).

## SELECT PRODUCT CITATIONS

- Karczewski, K.J., et al. 2011. Cooperative transcription factor associations discovered using regulatory variation. *Proc. Natl. Acad. Sci. USA* 108: 13353-13358.
- Onorati, M., et al. 2014. Molecular and functional definition of the developing human striatum. *Nat. Neurosci.* 17: 1804-1815.
- Glaser, L.V., et al. 2017. EBF1 binds to EBNA2 and promotes the assembly of EBNA2 chromatin complexes in B cells. *PLoS Pathog.* 13: e1006664.
- Lei, J.J., et al. 2019. Long noncoding RNA CDKN2B-AS1 interacts with transcription factor Bcl11A to regulate progression of cerebral infarction through mediating MAP4K1 transcription. *FASEB J.* 33: 7037-7048.
- Zhou, Y., et al. 2020. Identifying the cellular interactome of Epstein-Barr virus lytic regulator Zta reveals cellular targets contributing to viral replication. *J. Virol.* 94 pii: e00927-19.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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