SANTA CRUZ BIOTECHNOLOGY, INC.

EBF4 (A-12): sc-102506

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The Power to Question

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, EBF4 (early B-cell factor 4), also known as transcription factor COE4, is a 602 amino acid nuclear protein that binds the Olf1 site, the consensus sequence 5'-ATTCCCNNGGGAATT-3'. Like other members of the Olf-1/EBF (O/E) family of transcription factors, EBF4 may play an important role in B cell maturation and neural development. There are two isoforms of EBF4 that exist as a result of alternative splicing events. In regards to transcriptional activation of a reporter construct, all EBF4 isoforms are weaker than EBF, EBF2 and EBF3. By interacting with other O/E family members, EBF4 most likely forms homodimers or heterodimers to regulate gene expression.

REFERENCES

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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.
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5. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 65-73.
6. Sigvardsson, M. 2000. Overlapping expression of early B-cell factor and basic helix-loop-helix proteins as a mechanism to dictate B-lineage-specific activity of the Lambda 5 promoter. Mol. Cell. Biol. 20: 3640-3654.
7. Wang, S.S., et al. 2002. Cloning of a novel Olf-1/EBF-like gene, O/E-4, by degenerate oligo-based direct selection. Mol. Cell. Neurosci. 20: 404-414.
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CHROMOSOMAL LOCATION

Genetic locus: EBF4 (human) mapping to 20p13; Ebf4 (mouse) mapping to 2 F1.

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.

SOURCE

EBF4 (A-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of EBF4 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-102506 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EBF4 (A-12) is recommended for detection of EBF4 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); non cross-reactive with family member EBF.

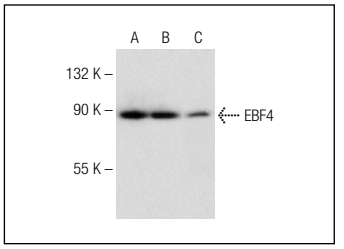
EBF4 (A-12) is also recommended for detection of EBF4 in additional species, including canine.

Suitable for use as control antibody for EBF4 siRNA (h): sc-77217, EBF4 siRNA (m): sc-143279, EBF4 shRNA Plasmid (h): sc-77217-SH, EBF4 shRNA Plasmid (m): sc-143279-SH, EBF4 shRNA (h) Lentiviral Particles: sc-77217-V and EBF4 shRNA (m) Lentiviral Particles: sc-143279-V.

Molecular Weight of EBF4: 64 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Daudi cell lysate: sc-2415 or U-698-M whole cell lysate.

DATA



EBF4 (A-12): sc-102506. Western blot analysis of EBF4 expression in U-698-M (**A**), Daudi (**B**) and Jurkat (**C**) whole cell lysates.

RESEARCH USE

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