SANTA CRUZ BIOTECHNOLOGY, INC.

Elf-4 (E-11): sc-515363

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Ets-1 family of transcription factors has a conserved DNA binding domain through which it plays an important role in cellular proliferation, differentiation, tematopoiesis and angiogenesis. This domain, also known as the Ets domain, binds to DNA sequences containing the consensus sequence 5'-WGGA-3', which is known as the Ets-binding domain. Elf-4, also known as myeloid Elf-1-like factor, ELF4 or MEF, is a 663 amino acid member of the Ets-1 family. Localized to the nucleus, Elf-4 is highly expressed in placenta and myeloid leukemia cells, with lower levels of expression lung, heart, thymus, slpeen, colon, ovary and peripheral blood lymphocytes. Functioning primarily to activate the promoters of hematopoietic growth factor genes, such as GM-CSF, IL-3 and IL-8, Elf-4 has also been shown to activate the Perforin 1 promoter in natural killer (NK) cells, suggesting a possible role in tumorigenesis.

REFERENCES

1. Miyazaki, Y., et al. 1996. MEF, a novel transcription factor with an Elf-1 like DNA binding domain but distinct transcriptional activating properties. Oncogene 13: 1721-1729.
2. Kai, H., et al. 1999. Myeloid ELF-1-like factor up-regulates lysozyme transcription in epithelial cells. J. Biol. Chem. 274: 20098-20102.
3. Mao, S., et al. 1999. Functional and physical interactions between AML1 proteins and an ETS protein, MEF: implications for the pathogenesis of t(8;21)-positive leukemias. Mol. Cell. Biol. 19: 3635-3644.
4. Suico, M.A., et al. 2002. Functional dissection of the ETS transcription factor MEF. Biochim. Biophys. Acta 1577: 113-120.
5. Lacorazza, H.D., et al. 2002. The ETS protein MEF plays a critical role in perforin gene expression and the development of natural killer and NK-T cells. Immunity 17: 437-449.
6. Hedvat, C.V., et al. 2004. Myeloid ELF1-like factor is a potent activator of interleukin-8 expression in hematopoietic cells. J. Biol. Chem. 279: 6395-6400.

CHROMOSOMAL LOCATION

Genetic locus: ELF4 (human) mapping to Xq26.1; Elf4 (mouse) mapping to X A4.

SOURCE

Elf-4 (E-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 583-599 within an internal region of Elf-4 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-515363 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-515363 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Elf-4 (E-11) is recommended for detection of Elf-4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Elf-4 siRNA (h): sc-91302, Elf-4 siRNA (m): sc-144630, Elf-4 shRNA Plasmid (h): sc-91302-SH, Elf-4 shRNA Plasmid (m): sc-144630-SH, Elf-4 shRNA (h) Lentiviral Particles: sc-91302-V and Elf-4 shRNA (m) Lentiviral Particles: sc-144630-V.

Elf-4 (E-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

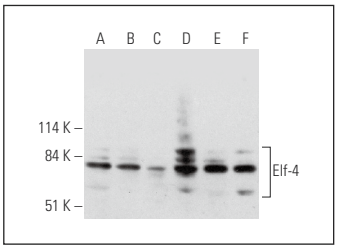
Molecular Weight of Elf-4: 71 kDa.

Positive Controls: HL-60 nuclear extract: sc-2147, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

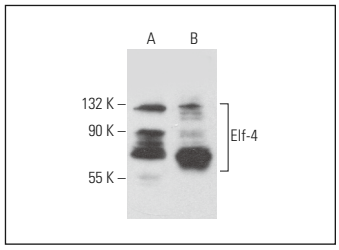
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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.

DATA



Elf-4 (E-11): sc-515363. Western blot analysis of Elf-4 expression in Jurkat (**A**), HL-60 (**B**), HEL 92.1.7 (**C**) and MEG-01 (**D**) nuclear extracts and HeLa (**E**) and K-562 (**F**) whole cell lysates.



Elf-4 (E-11): sc-515363. Western blot analysis of Elf-4 expression in CCRF-CEM (**A**) and C2C12 (**B**) whole cell lysates.

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.