

AFF4 (3D2): sc-101062

BACKGROUND

AFF4 (AF4/FMR2 family, member 4), also known as MCEF or AF5Q31, localizes to the nucleus and is a member of the AF4 family of transcription factors. Ubiquitously expressed with highest expression in placenta, heart, pancreas and skeletal muscle, AFF4 is a 1,163 amino acid component of the positive transcription elongation factor β (P-TEFb) complex that contains Cdk9 (cyclin-dependent kinase 9) and cyclin T1. AFF4 is thought to function as a transcription factor that positively regulates transcription during fetal development, as well as in adult tissue. Defects in the gene encoding AFF4 lead to expression of an MLL-AFF4 (myeloid/lymphoid or mixed-lineage leukemia-AFF4) fusion protein that is found in acute lymphoblastic leukemia (ALL), implicating AFF4 in the pathogenesis of ALL. Three isoforms of AFF4 are expressed due to alternative splicing events.

REFERENCES

1. Taki, T., et al. 1999. AF5q31, a newly identified AF4-related gene, is fused to MLL in infant acute lymphoblastic leukemia with ins(5;11)(q31;q13q23). *Proc. Natl. Acad. Sci. USA* 96: 14535-14540.
2. Estable, M.C., et al. 2002. MCEF, the newest member of the AF4 family of transcription factors involved in leukemia, is a positive transcription elongation factor β -associated protein. *J. Biomed. Sci.* 9: 234-245.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604417. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: AFF4 (human) mapping to 5q31.1.

SOURCE

AFF4 (3D2) is a mouse monoclonal antibody raised against recombinant AFF4 of human origin.

PRODUCT

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

APPLICATIONS

AFF4 (3D2) is recommended for detection of AFF4 of 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)], 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).

Suitable for use as control antibody for AFF4 siRNA (h): sc-91842, AFF4 shRNA Plasmid (h): sc-91842-SH and AFF4 shRNA (h) Lentiviral Particles: sc-91842-V.

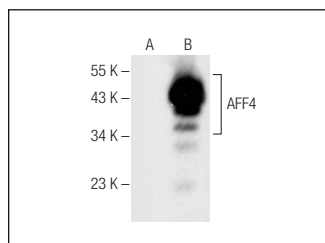
Molecular Weight of AFF4: 127 kDa.

Positive Controls: AFF4 (h): 293T Lysate: sc-114129.

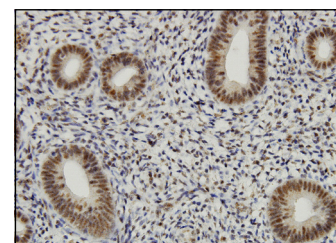
RECOMMENDED SUPPORT REAGENTS

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, 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



AFF4 (3D2): sc-101062. Western blot analysis of AFF4 expression in non-transfected: sc-117752 (A) and human AFF4 transfected: sc-114129 (B) 293T whole cell lysates.



AFF4 (3D2): sc-101062. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human endometrium tissue showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Dey, S.S., et al. 2012. Mutual information analysis reveals coevolving residues in Tat that compensate for two distinct functions in HIV-1 gene expression. *J. Biol. Chem.* 287: 7945-7955.
2. Fufa, T.D., et al. 2015. The Tax oncogene enhances ELL incorporation into p300 and P-TEFb containing protein complexes to activate transcription. *Biochem. Biophys. Res. Commun.* 465: 5-11.

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 for detailed protocols and support products.