



AFF4 (F-12): sc-107133

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 b (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., Kano, H., Taniwaki, M., Sako, M., Yanagisawa, M. and Hayashi, Y. 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., Naghavi, M.H., Kato, H., Xiao, H., Qin, J., Vahlne, A. and Roeder, R.G. 2002. MCEF, the newest member of the AF4 family of transcription factors involved in leukemia, is a positive transcription elongation factor-b-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/>
4. Urano, A., Endoh, M., Wada, T., Morikawa, Y., Itoh, M., Kataoka, Y., Taki, T., Akazawa, H., Nakajima, H., Komuro, I., Yoshida, N., Hayashi, Y., Handa, H., Kitamura, T. and Nosaka, T. 2005. Infertility with defective spermiogenesis in mice lacking AF5q31, the target of chromosomal translocation in human infant leukemia. *Mol. Cell. Biol.* 25: 6834-6845.
5. Niedzielski, M.F., Hopewell, R., Ismail, Z. and Estable, M.C. 2007. MCEF is localized to the nucleus by protein sequences encoded within three distinct exons, where it represses HIV-1 Tat-transactivation of LTR-directed transcription. *Int. J. Biol. Sci.* 3: 225-236.

CHROMOSOMAL LOCATION

Genetic locus: AFF4 (human) mapping to 5q31.1; Aff4 (mouse) mapping to 11 B1.3.

SOURCE

AFF4 (F-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of AFF4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107133 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AFF4 (F-12) is recommended for detection of AFF4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 AFF4 siRNA (h): sc-91842, AFF4 siRNA (m): sc-140897, AFF4 shRNA Plasmid (h): sc-91842-SH, AFF4 shRNA Plasmid (m): sc-140897-SH, AFF4 shRNA (h) Lentiviral Particles: sc-91842-V and AFF4 shRNA (m) Lentiviral Particles: sc-140897-V.

Molecular Weight of AFF4: 127 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.