



## AF-4 (M-90): sc-99061

### BACKGROUND

Proto-oncogene AF-4 (or FEL) is a product of a chromosomal aberration of the human gene *AFF1*, which is associated with acute leukemias. The fusion of AF-4 on chromosome band 4q21 with the mixed lineage leukemia (MLL or HRX) gene on 11q23 results in a MLL-AF-4 chimeric transcription factor in which AF-4 contributes transcriptional effector properties and requires cell-specific accessory factors. MLL is involved in several chromosomal translocations associated with acute myeloid and lymphoid leukemia. The MLL-AF-4 fusion protein is expressed in all normal hematopoietic cells. The expression of MLL-AF-4 influences the production of protein cyclin-dependent kinase inhibitor (CDKN1B), suggesting that inhibition of MLL-AF-4 expression may be a powerful and highly specific treatment of chemotherapy-resistant leukemia.

### REFERENCES

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- Xia, Z.B., et al. 2005. The MLL fusion gene, MLL-AF4, regulates cyclin-dependent kinase inhibitor CDKN1B (p27kip1) expression. *Proc. Natl. Acad. Sci. USA* 102: 14028-14033.
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- Thomas, M., et al. 2005. Targeting MLL-AF4 with short interfering RNAs inhibits clonogenicity and engraftment of t(4;11)-positive human leukemic cells. *Blood* 106: 3559-3566.
- Jansen, M.W., et al. 2005. Efficient and easy detection of MLL-AF4, MLL-AF9 and MLL-ENL fusion gene transcripts by multiplex real-time quantitative RT-PCR in TaqMan and LightCycler. *Leukemia* 19: 2016-2018.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

### CHROMOSOMAL LOCATION

Genetic locus: *Aff1* (mouse) mapping to 5 E.

### SOURCE

AF-4 (M-90) is a rabbit polyclonal antibody raised against amino acids 108-197 mapping near the N-terminus of AF-4 of mouse origin.

### PRODUCT

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

### APPLICATIONS

AF-4 (M-90) is recommended for detection of AF-4 of mouse and rat 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).

Suitable for use as control antibody for AF-4 siRNA (m): sc-60132, AF-4 shRNA Plasmid (m): sc-60132-SH and AF-4 shRNA (m) Lentiviral Particles: sc-60132-V.

Molecular Weight of AF-4: 131 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

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