

MLL (10F8D7): sc-101431

BACKGROUND

Eukaryotic RNA polymerase II mediates the synthesis of mature and functional messenger RNA. This is a multistep process, called the transcription cycle, that includes five stages: preinitiation, promoter, clearance, elongation and termination. Elongation is thought to be a critical stage for the regulation of gene expression. ELL (11-19 lysine-rich leukemia protein, also designated MEN) functions as an RNA polymerase II elongation factor that increases the rate of transcription by suppressing transient pausing by RNA polymerase II. Also, ELL is thought to regulate cellular proliferation. ELL is abundantly expressed in peripheral blood leukocytes, skeletal muscle, placenta and testis, and has lower expression in spleen, thymus, heart, brain, lung, kidney, liver and ovary. The gene encoding human ELL, which maps to chromosome 19p13.1, is one of several genes which undergo translocation with the MLL gene on chromosome 11q23 in acute myeloid leukemia. MLL (myeloid/lymphoid leukemia, also designated ALL-1 and HRX) regulates embryonal and hematopoietic development.

REFERENCES

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2. Shilatfard, A., et al. 1997. Structure and function of RNA polymerase II elongation factor ELL. Identification of two overlapping ELL functional domains that govern its interaction with polymerase and the ternary elongation complex. *J. Biol. Chem.* 272: 22355-22363.
3. Ennas, M.G., et al. 1997. The human ALL-1/MLL/HRX antigen is predominantly localized in the nucleus of resting and proliferating peripheral blood mononuclear cells. *Cancer Res.* 57: 2035-2041.
4. Butler, L.H., et al. 1997. The HRX proto-oncogene product is widely expressed in human tissues and localizes to nuclear structures. *Blood* 89: 3361-3370.
5. Shilatfard, A. 1998. Factors regulating the transcriptional elongation activity of RNA polymerase II. *FASEB J.* 12: 1437-1446.
6. Kanda, Y., et al. 1998. Overexpression of the MEN/ELL protein, an RNA polymerase II elongation factor, results in transformation of Rat1 cells with dependence on the lysine-rich region. *J. Biol. Chem.* 273: 5248-5252.

CHROMOSOMAL LOCATION

Genetic locus: KMT2A (human) mapping to 11q23.3.

SOURCE

MLL (10F8D7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 3751-3986 of MLL of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MLL (10F8D7) is recommended for detection of MLL of 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), 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 MLL siRNA (h): sc-38039, MLL shRNA Plasmid (h): sc-38039-SH and MLL shRNA (h) Lentiviral Particles: sc-38039-V.

Molecular Weight of MLL: 430 kDa.

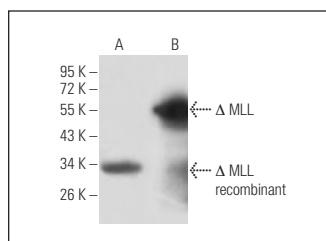
Molecular Weight of MLL N-Terminal cleavage: 320 kDa.

Molecular Weight of MLL C-Terminal cleavage: 180 kDa.

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MLL (10F8D7): sc-101431. Western blot analysis of truncated human recombinant MLL protein (A) and MLL expression in truncated MLL transfected COS-7 cells (B).

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.