

# MLL (E-20): sc-30729

## 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. It is also thought to regulate cellular proliferation. ELL is abundantly expressed in peripheral blood leukocytes, skeletal muscle, placenta and testis, with 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 that undergo translocation with the MLL gene on chromosome 11q23.3 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. Shilatifard, 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. Shilatifard, A. 1998. Factors regulating the transcriptional elongation activity of RNA polymerase II. *FASEB J.* 12: 1437-1446.
5. 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.
6. Shinobu, N., et al. 1999. Physical interaction and functional antagonism between the RNA polymerase II elongation factor ELL and p53. *J. Biol. Chem.* 274: 17003-17010.
7. Megonigal, M.D., et al. 2000. Panhandle PCR for cDNA: a rapid method for isolation of MLL fusion transcripts involving unknown partner genes. *Proc. Natl. Acad. Sci. USA* 97: 9597-9602.

## CHROMOSOMAL LOCATION

Genetic locus: MLL (human) mapping to 11q23.3; Mll1 (mouse) mapping to 9 A5.2.

## SOURCE

MLL (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MLL 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-30729 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MLL (E-20) is recommended for detection of MLL 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).

MLL (E-20) is also recommended for detection of MLL in additional species, including canine, bovine and avian.

Suitable for use as control antibody for MLL siRNA (h): sc-38039, MLL siRNA (m): sc-38040, MLL shRNA Plasmid (h): sc-38039-SH, MLL shRNA Plasmid (m): sc-38040-SH, MLL shRNA (h) Lentiviral Particles: sc-38039-V and MLL shRNA (m) Lentiviral Particles: sc-38040-V.

Molecular Weight of MLL: 430 kDa.

Molecular Weight of MLL N320/C180 cleavage: 320/180 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.


 MONOS  
 Satisfation  
 Guaranteed

Try **MLL (D-3): sc-377274** or **MLL (H-10): sc-374392**, our highly recommended monoclonal alternatives to MLL (E-20).