SANTA CRUZ BIOTECHNOLOGY, INC.

ELL (B-4): sc-398959

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 19p13.11, 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

1. Thirman, M.J., et al. 1994. Cloning of ELL, a gene that fuses to MLL in a t(11;19)(q23;p13.1) in acute myeloid leukemia. Proc. Natl. Acad. Sci. USA 91: 12110-12114.
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.

CHROMOSOMAL LOCATION

Genetic locus: ELL (human) mapping to 19p13.11; Ell (mouse) mapping to 8 B3.3.

SOURCE

ELL (B-4) is a mouse monoclonal antibody raised against amino acids 341-520 mapping within an internal region of ELL of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ELL (B-4) is available conjugated to agarose (sc-398959 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398959 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398959 PE), fluorescein (sc-398959 FITC), Alexa Fluor® 488 (sc-398959 AF488), Alexa Fluor® 546 (sc-398959 AF546), Alexa Fluor® 594 (sc-398959 AF594) or Alexa Fluor® 647 (sc-398959 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398959 AF680) or Alexa Fluor® 790 (sc-398959 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ELL (B-4) is recommended for detection of ELL of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 ELL siRNA (h): sc-38041, ELL siRNA (m): sc-38042, ELL shRNA Plasmid (h): sc-38041-SH, ELL shRNA Plasmid (m): sc-38042-SH, ELL shRNA (h) Lentiviral Particles: sc-38041-V and ELL shRNA (m) Lentiviral Particles: sc-38042-V.

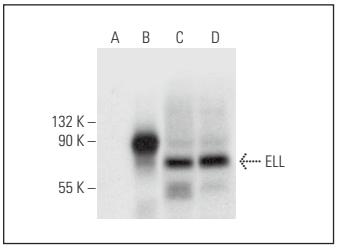
Molecular Weight of ELL: 68 kDa.

Positive Controls: ELL (h): 293T Lysate: sc-115994, JAR cell lysate: sc-2276 or Caki-1 cell lysate: sc-2224.

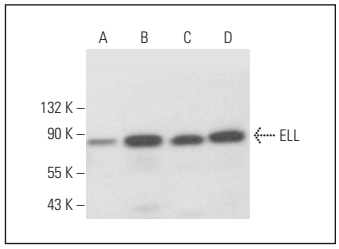
RECOMMENDED SUPPORT REAGENTS

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.

DATA



ELL (B-4): sc-398959. Western blot analysis of ELL expression in non-transfected 293T: sc-117752 (**A**), human ELL transfected 293T: sc-115994 (**B**), JAR (**C**) and Caki-1 (**D**) whole cell lysates.



ELL (B-4): sc-398959. Western blot analysis of ELL expression in JAR (**A**), NCI-H929 (**B**), PC-3 (**C**) and K-562 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chappidi, N., et al. 2020. Fork cleavage-religation cycle and active transcription mediate replication restart after fork stalling at co-transcriptional R-loops. Mol. Cell 77: 528-541.e8.
2. Andrs, M., et al. 2023. Excessive reactive oxygen species induce transcription-dependent replication stress. Nat. Commun. 14: 1791.

RESEARCH USE

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