SANTA CRUZ BIOTECHNOLOGY, INC.

ENL (D-6): sc-393196

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The MLL (ALL-1, HRX) gene influences myelomonocytic differentiation, and different chromosomal translocations can result in a range of MLL fusion proteins that mediate leukemia. Frequent translocation partners of MLL include ELL, ENL, AF4, AF6 and AF9. ELL (elongation factor RNA polymerase II, Men) encodes an RNA polymerase II elongation factor that is implicated in t(11;19)(q23;p13.1) translocation in myeloid leukemias. AF9 (MLLT3, YEATS3) fusion with the MLL gene results in a t[(9;11)(p22;q23)] translocation, which is associated with *de novo* acute myelogenous leukemia (AML). ENL (MLLT1, LTG19, YEATS1, 11-19 leukemia protein) is capable of activating transcription from synthetic reporter genes in both lymphoid and myeloid cells. The t[(11;19)(q23;p13)] translocation results in the MLL-ENL fusion protein, which is commonly found in infant acute leukemias of both the myeloid and lymphoid lineage.

REFERENCES

1. 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.
2. Shilatifard, A. 1998. Factors regulating the transcriptional elongation activity of RNA polymerase II. FASEB J. 12: 1437-1446.
3. 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.
4. Strissel, P.L., et al. 2000. DNA structural properties of AF9 are similar to MLL and could act as recombination hot spots resulting in MLL/AF9 translocations and leukemogenesis. Hum. Mol. Genet. 9: 1671-1679.
5. Murmann, A.E., et al. 2005. Local gene density predicts the spatial position of genetic loci in the interphase nucleus. Exp. Cell Res. 311: 14-26.

CHROMOSOMAL LOCATION

Genetic locus: MLLT1 (human) mapping to 19p13.3; Mllt1 (mouse) mapping to 17 D.

SOURCE

ENL (D-6) is a mouse monoclonal antibody raised against amino acids 131-188 mapping within an internal region of ENL of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ENL (D-6) is available conjugated to agarose (sc-393196 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393196 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393196 PE), fluorescein (sc-393196 FITC), Alexa Fluor® 488 (sc-393196 AF488), Alexa Fluor® 546 (sc-393196 AF546), Alexa Fluor® 594 (sc-393196 AF594) or Alexa Fluor® 647 (sc-393196 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393196 AF680) or Alexa Fluor® 790 (sc-393196 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ENL (D-6) is recommended for detection of ENL 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 ENL siRNA (h): sc-44791, ENL siRNA (m): sc-44792, ENL shRNA Plasmid (h): sc-44791-SH, ENL shRNA Plasmid (m): sc-44792-SH, ENL shRNA (h) Lentiviral Particles: sc-44791-V and ENL shRNA (m) Lentiviral Particles: sc-44792-V.

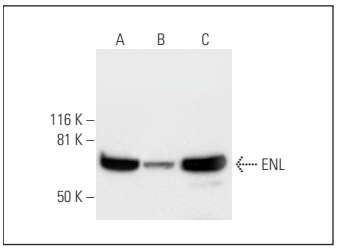
Molecular Weight of ENL: 62 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or Raji whole cell lysate: sc-364236.

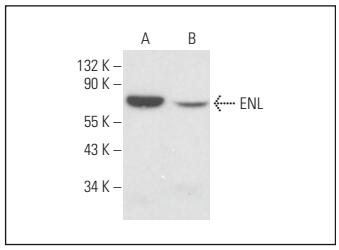
RECOMMENDED SUPPORT REAGENTS

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



ENL (D-6): sc-393196. Western blot analysis of ENL expression in Jurkat (**A**), K-562 (**B**) and Raji (**C**) whole cell lysates.



ENL (D-6): sc-393196. Western blot analysis of ENL expression in M1 (**A**) and BW5147 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, B., et al. 2019. Yeats4 drives ILC lineage commitment via activation of Lmo4 transcription. J. Exp. Med. 216: 2653-2668.

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.