SANTA CRUZ BIOTECHNOLOGY, INC.

ENX-1 (C-1): sc-166609

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In *Drosophila,* the Polycomb (PcG) gene family encodes chromatin proteins that are required for the repression of homeotic loci in embryonic development. PcG proteins work in conjunction with the trithorax-group (trxG), which activate homeobox gene expression during embryonic development. ENX-1, a mammalian homolog of the *Drosophila* gene enhancer of zeste, is a PcG protein that is ubiquitously expressed during early embryogenesis and becomes restricted to the central and peripheral nervous systems and sites of fetal hematopoiesis during later development. In the adult, ENX-1 is restricted to specific sites, including spleen, testis and placenta. The gene encoding human ENX-1 transcribes a 746 amino acid polypeptide which contains a trithorax-like domain and a DNA-binding motif. ENX-1 interacts with the proto-oncogene product Vav and is thought to be involved in the proliferation of normal and malignant hematopoietic cells. By altering the regulation of target genes, ENX-1 may also contribute to certain phenotypes of Down syndrome.

CHROMOSOMAL LOCATION

Genetic locus: EZH2 (human) mapping to 7q36.1; Ezh2 (mouse) mapping to 6 B2.3.

SOURCE

ENX-1 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 63-102 within an internal region of ENX-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-166609 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-166609 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ENX-1 (C-1) is recommended for detection of ENX-1 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). ENX-1 (C-1) is also recommended for detection of ENX-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ENX-1 siRNA (h): sc-35312, ENX-1 siRNA (m): sc-156000, ENX-1 shRNA Plasmid (h): sc-35312-SH, ENX-1 shRNA Plasmid (m): sc-156000-SH, ENX-1 shRNA (h) Lentiviral Particles: sc-35312-V and ENX-1 shRNA (m) Lentiviral Particles: sc-156000-V.

ENX-1 (C-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

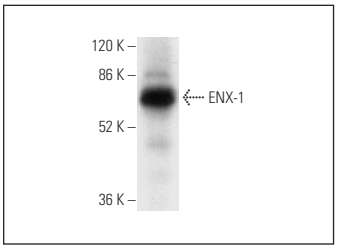
Molecular Weight (predicted) of ENX-1: 85 kDa.

Molecular Weight (observed) of ENX-1: 81-102 kDa.

STORAGE

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

DATA



ENX-1 (C-1): sc-166609. Western blot analysis of ENX-1 expression in human placenta tissue extract.

SELECT PRODUCT CITATIONS

1. Hu, P., et al. 2015. NBAT1 suppresses breast cancer metastasis by regulating DKK1 via PRC2. Oncotarget 6: 32410-32425.
2. D'Angelo, V., et al. 2015. EZH2 is increased in paediatric T-cell acute lymphoblastic leukemia and is a suitable molecular target in combination treatment approaches. J. Exp. Clin. Cancer Res. 34: 83.
3. Ramaglia, M., et al. 2016. High EZH2 expression is correlated to metastatic disease in pediatric soft tissue sarcomas. Cancer Cell Int. 16: 59.
4. Xu, Z., et al. 2016. NF-YA promotes invasion and angiogenesis by upregulating EZH2-Stat3 signaling in human melanoma cells. Oncol. Rep. 35: 3630-3638.
5. Zheng, M., et al. 2019. EZH2 promotes invasion and tumour glycolysis by regulating Stat3 and FoxO1 signalling in human OSCC cells. J. Cell. Mol. Med. 23: 6942-6954.
6. Kaundal, B., et al. 2020. Nanoformulation of EPZ011989 attenuates EZH2-c-Myb epigenetic interaction by proteasomal degradation in acute myeloid leukemia. Mol. Pharm. 17: 604-621.
7. Kaundal, B., et al. 2020. A non-viral nano-delivery system targeting epigenetic methyltransferase EZH2 for precise acute myeloid leukemia therapy. J. Mater. Chem. B 8: 8658-8670.
8. Bah, I., et al. 2022. KDM6A lysine demethylase directs epigenetic polarity of MDSCs during murine sepsis. J. Innate Immun. 14: 112-123.
9. Kaundal, B., et al. 2022. Mitochondria-targeting nano therapy altering IDH2-mediated EZH2/EZH1 interaction as precise epigenetic regulation in glioblastoma. Biomater. Sci. E-published.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.