SANTA CRUZ BIOTECHNOLOGY, INC.

SUZ12 (P-15): sc-46264

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Polycomb group (PcG) genes contribute to the maintenance of cell identity, cell cycle regulation and oncogenesis. The mammalian PcG proteins are regulatory proteins important for Hox gene expression, axial skeleton development and the control of proliferation and survival of hematopoietic cells. By inducing changes in chromatin structure, the PcG proteins are part of a cellular memory system that is responsible for gene activity being inherited to progeny cells. PcG proteins silence gene expression through the formation of multimeric protein complexes with different compositions. Manipulating the expression-levels of various PcG proteins in mammalian cell lines results in cellular transformation, which may be a link between the chromatin-associated PcG proteins and cancer. Polycomb protein SUZ12, also designated ChET 9 protein or joined-to-JAZF1 protein, is a nuclear protein belonging to the VEFS (VRN2-EMF2-FIS2-SUZ12) family. SUZ12 has been detected at the breakpoints of a certain recurrent chromosomal translocation which has been reported in endometrial stromal sarcoma. It is a component of the PRC2 complex, composed of EED, EZH2, SUZ12/JJAZ1, RBBP4 and RBBP7.

CHROMOSOMAL LOCATION

Genetic locus: SUZ12 (human) mapping to 17q11.2; Suz12 (mouse) mapping to 11 B5.

SOURCE

SUZ12 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SUZ12 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-46264 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SUZ12 (P-15) is recommended for detection of SUZ12 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SUZ12 (P-15) is also recommended for detection of SUZ12 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SUZ12 siRNA (h): sc-45597, SUZ12 siRNA (m): sc-45598, SUZ12 shRNA Plasmid (h): sc-45597-SH, SUZ12 shRNA Plasmid (m): sc-45598-SH, SUZ12 shRNA (h) Lentiviral Particles: sc-45597-V and SUZ12 shRNA (m) Lentiviral Particles: sc-45598-V.

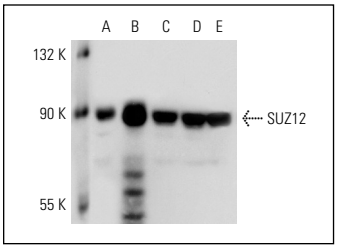
Molecular Weight of SUZ12: 93 kDa.

Positive Controls: SUZ12 (h): 293 Lysate: sc-111839, HeLa whole cell lysate: sc-2200 or SW480 cell lysate: sc-2219.

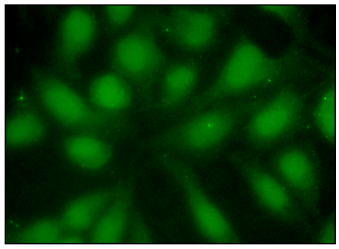
STORAGE

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

DATA



SUZ12 (P-15): sc-46264. Western blot analysis of SUZ12 expression in non-transfected 293: sc-110760 (**A**), human SUZ12 transfected 293: sc-111839 (**B**), HeLa (**C**), SW480 (**D**) and JEG-3 (**E**) whole cell lysates.



SUZ12 (P-15)): sc-46264. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cytoplasmic localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School.

SELECT PRODUCT CITATIONS

1. Hansen, K.H., et al. 2008. A model for transmission of the H3K27me3 epigenetic mark. Nat. Cell Biol. 10: 1291-1300.
2. Ross, P.J., et al. 2008. Polycomb gene expression and histone H3 lysine 27 trimethylation changes during bovine preimplantation development. Reproduction 136: 777-785.
3. Ernst, T., et al. 2010. Inactivating mutations of the histone methyltransferase gene EZH2 in myeloid disorders. Nat. Genet. 42: 722-726.
4. Pasini, D., et al. 2010. Characterization of an antagonistic switch between histone H3 lysine 27 methylation and acetylation in the transcriptional regulation of Polycomb group target genes. Nucleic Acids Res. 38: 4958-4969.
5. Singla, V., et al. 2010. Floxin, a resource for genetically engineering mouse ESCs. Nat. Methods 7: 50-52.
6. Score, J., et al. 2012. Inactivation of polycomb repressive complex 2 components in myeloproliferative and myelodysplastic/myeloproliferative neoplasms. Blood 119: 1208-1213.

RESEARCH USE

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

PROTOCOLS

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