SANTA CRUZ BIOTECHNOLOGY, INC.

EPC1 (H-103): sc-134532



BACKGROUND

Enhancer of Polycomb 1 (EPC1) is a member of the Polycomb group (PcG) proteins. EPC1 interacts with the transcriptional repressor E2F6. In proliferating cells, the proliferation-specific PcG, EZH2, associates with this E2F6-EPC1 complex, which may regulate genes required for cell cycle promotion. EPC1 also interacts with a member of the RING finger protein family (RFP), and this complex functions as a transcriptional repressor. Lastly, EPC1 is a component of the NuA4 histone acetyltransferase (HAT) complex, which transcriptionally activates certain genes by acetylation of Histones H4 and H2A. This acetylation may alter nucleosome-DNA interactions and promote interaction of the modified histones with other positive transcription regulators. The HAT complex may play a role in oncogene/proto-oncogene growth induction, tumor suppressor growth arrest, replicative senescence, apoptosis and DNA repair.

REFERENCES

- Shimono, Y., Murakami, H., Hasegawa, Y. and Takahashi, M. 2001. RET finger protein is a transcriptional repressor and interacts with enhancer of Polycomb that has dual transcriptional functions. J. Biol. Chem. 275: 39411-39419.
- Tezel, G., Shimono, Y., Murakumo, Y., Kawai, K., Fukuda, T., Iwahashi, N. and Takahashi, M. 2002. Role for O-glycosylation of RFP in the interaction with enhancer of Polycomb. Biochem. Biophys. Res. Commun. 290: 409-414.
- Doyon, Y., Selleck, W., Lane, W.S., Tan, S. and Côte, J. 2004. Structural and functional conservation of the NuA4 histone acetyltransferase complex from yeast to humans. Mol. Cell. Biol. 24: 1884-1896.
- Williams, N.E. 2004. The epiplasm gene EPC1 influences cell shape and cortical pattern in *Tetrahymena thermophila*. J. Eukaryot. Microbiol. 51: 201-206.
- Attwooll, C., Oddi, S., Cartwright, P., Prosperini, E., Agger, K., Steensgaard, P., Wagener, C., Sardet, C., Moroni, M.C. and Helin, K. 2005. A novel repressive E2F6 complex containing the Polycomb group protein, EPC1, that interacts with EZH2 in a proliferation-specific manner. J. Biol. Chem. 280: 1199-1208.
- Matsuura, T., Shimono, Y., Kawai, K., Murakami, H., Urano, T., Niwa, Y., Goto, H. and Takahashi, M. 2005. PIAS proteins are involved in the SUMO-1 modification, intracellular translocation and transcriptional repressive activity of RET finger protein. Exp. Cell Res. 308: 65-77.

CHROMOSOMAL LOCATION

Genetic locus: EPC1 (human) mapping to 10p11.22; Epc1 (mouse) mapping to 18 A1.

SOURCE

EPC1 (H-103) is a rabbit polyclonal antibody raised against amino acids 683-785 mapping near the C-terminus of EPC1 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-134532 X, 200 $\mu g/0.1$ ml.

APPLICATIONS

EPC1 (H-103) is recommended for detection of EPC1 isoforms 1-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

EPC1 (H-103) is also recommended for detection of EPC1 isoforms 1-4 in additional species, including equine, canine, bovine, porcine and avian.

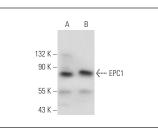
Suitable for use as control antibody for EPC1 siRNA (h): sc-60589, EPC1 siRNA (m): sc-60590, EPC1 shRNA Plasmid (h): sc-60589-SH, EPC1 shRNA Plasmid (m): sc-60590-SH, EPC1 shRNA (h) Lentiviral Particles: sc-60589-V and EPC1 shRNA (m) Lentiviral Particles: sc-60590-V.

EPC1 (H-103) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of EPC1: 92 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or RAW 264.7 whole cell lysate: sc-2211.

DATA



EPC1 (H-103): sc-134532. Western blot analysis of EPC1 expression in HeLa (**A**) and RAW 264.7 (**B**) whole cell lysates.

RESEARCH USE

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

