SANTA CRUZ BIOTECHNOLOGY, INC.

PLZF (H-300): sc-22839

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hypermethylated in cancer (HIC-1) was originally identified as a target of p53-induced gene expression. HIC-1 is deleted in the genetic disorder Miller-Dieker syndrome (MDS), and the expression of HIC-1 is also frequently suppressed in leukemia and various cancers due to the hypermethylation of specific DNA regions and the resulting transcriptional silencing. These and other studies indicate that HIC-1 acts as a putative tumor suppressor protein that mediates transcriptional repression. HIC-1 is ubiquitously expressed in adult tissues. Its structure is defined by five zinc fingers and an N-terminal broad complex POZ (or BTB) domain. The BTB/POZ domain mediates homomeric and heteromeric POZ-POZ interactions and is common to transcriptional regulators involved in chromatin modeling. In several BTB/POZ containing proteins, including BCL-6 and the promyelocytic leukemia zinc-finger (PLZF) oncoprotein, this domain interacts with the SMRT/N-CoR-mSin3A HDAC complex and is directly involved in repressing and silencing gene transcription. When this domain is deleted, as with the oncogenic PLZF-RAR chimera of promyelocytic leukemias, this transcriptional repression is attenuated. Conversely, HIC-1 does not interact with components of the HDAC complex, suggesting that HIC-1-induced transcriptional repression is unassociated with the POZ/BTB domain.

CHROMOSOMAL LOCATION

Genetic locus: ZBTB16 (human) mapping to 11q23.2; Zbtb16 (mouse) mapping to 9 A5.3.

SOURCE

PLZF (H-300) is a rabbit polyclonal antibody raised against amino acids 101-400 of PLZF 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.

APPLICATIONS

PLZF (H-300) is recommended for detection of PLZF 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).

PLZF (H-300) is also recommended for detection of PLZF in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PLZF siRNA (h): sc-37149, PLZF siRNA (m): sc-37150, PLZF siRNA (r): sc-156168, PLZF shRNA Plasmid (h): sc-37149-SH, PLZF shRNA Plasmid (m): sc-37150-SH, PLZF shRNA Plasmid (r): sc-156168-SH, PLZF shRNA (h) Lentiviral Particles: sc-37149-V, PLZF shRNA (m) Lentiviral Particles: sc-37150-V and PLZF shRNA (r) Lentiviral Particles: sc-156168-V.

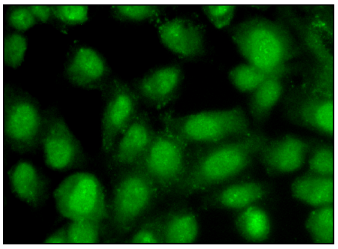
Molecular Weight of PLZF: 80-90 kDa.

Positive Controls: TF-1 cell sc-2412 or HEL 92.1.7 cell lysate: sc-2270.

STORAGE

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

DATA



PLZF (H-300): sc-22839. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear 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. Nagy, I., et al. 2005. Promyelocytic leukemia zinc finger protein localizes to the cochlear outer hair cells and interacts with prestin, the outer hair cell motor protein. Hear. Res. 204: 216-222.
2. Moreno, S.G., et al. 2010. TGFβ signaling in male germ cells regulates gonocyte quiescence and fertility in mice. Dev. Biol. 342: 74-84.
3. Kubota, H., et al. 2011. Glial cell line-derived neurotrophic factor and endothelial cells promote self-renewal of rabbit germ cells with spermatogonial stem cell properties. FASEB J. 25: 2604-2614.
4. Spicuglia, S., et al. 2011. Characterisation of genome-wide PLZF/RARA target genes. Dev. Biol. 342: 74-84.
5. Hou, M., et al. 2011. Ontogenesis of Ap-2γ expression in rat testes. Sex. Dev. 5: 188-196.
6. Mok, K.W., et al. 2011. A study to assess the assembly of a functional blood-testis barrier in developing rat testes. Spermatogenesis 1: 270-280.
7. Workman, A., et al. 2012. Cellular transcription factors induced in trigeminal ganglia during dexamethasone-induced reactivation from latency stimulate bovine herpesvirus 1 productive infection and certain viral promoters. J. Virol. 86: 2459-2473.

RESEARCH USE

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