

PHF1 (864C6a): sc-130646

BACKGROUND

PHF1 (PHD protein finger 1), also known as polycomb-like protein 1 or hPC11, is a 567 amino acid member of the PHD finger protein family. Members of the PHD finger protein family function as transcriptional regulators that affect gene expression by modulating chromatin structure. With a subcellular localization to the nucleus, PHF1 is widely expressed in tissues, with high expression in pancreas, heart and skeletal muscle and low expression in liver, lung, kidney, brain and placenta. PHF1 contains 2 PHD-type zinc finger domains, which may contribute to the transcriptional activity of PHF1. PHF1 is thought to interact with ENX-1, a component of PRC2 (polycomb repressive complex 2), increasing the gene silencing activity of PRC2. PHF1 exists as two isoforms produced by alternative splicing.

REFERENCES

1. Coulson, M., et al. 1998. The identification and localization of a human gene with sequence similarity to Polycomb-like of *Drosophila melanogaster*. *Genomics* 48: 381-383.
2. O'Connell, S., et al. 2001. Polycomb-like PHD fingers mediate conserved interaction with enhancer of zeste protein. *J. Biol. Chem.* 276: 43065-43073.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602881. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Villa, R., et al. 2007. Role of the polycomb repressive complex 2 in acute promyelocytic leukemia. *Cancer Cell* 11: 513-525.
5. Cao, R., et al. 2008. Role of hPHF1 in H3K27 methylation and Hox gene silencing. *Mol. Cell. Biol.* 28: 1862-1872.
6. Sarma, K., et al. 2008. Ezh2 requires PHF1 to efficiently catalyze H3 lysine 27 trimethylation *in vivo*. *Mol. Cell. Biol.* 28: 2718-2731.
7. Hong, Z., et al. 2008. A polycomb group protein, PHF1, is involved in the response to DNA double-strand breaks in human cell. *Nucleic Acids Res.* 36: 2939-2947.

CHROMOSOMAL LOCATION

Genetic locus: PHF1 (human) mapping to 6p21.32.

SOURCE

PHF1 (864C6a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of PHF1 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 1.0% gelatin.

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.

APPLICATIONS

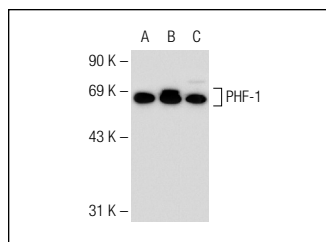
PHF1 (864C6a) is recommended for detection of PHF1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for PHF1 siRNA (h): sc-95264, PHF1 shRNA Plasmid (h): sc-95264-SH and PHF1 shRNA (h) Lentiviral Particles: sc-95264-V.

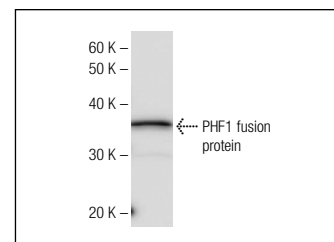
Molecular Weight of PHF1: 62 kDa.

Positive Controls: PHF1 (h): 293T Lysate: sc-171702 or A-431 whole cell lysate: sc-2201.

DATA



PHF1 (864C6a): sc-130646. Western blot analysis of PHF1 expression in non-transfected 293T: sc-117752 (A), human PHF1 transfected 293T: sc-171702 (B) and A-431 (C) whole cell lysates.



PHF1 (864C6a): sc-130646. Western blot analysis of human recombinant PHF1 fusion protein.

SELECT PRODUCT CITATIONS

1. Yang, Y., et al. 2013. Polycomb group protein PHF1 regulates p53-dependent cell growth arrest and apoptosis. *J. Biol. Chem.* 288: 529-539.

PROTOCOLS

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