

PHC1 (D-10): sc-390880

BACKGROUND

Polycomb group (PcG) proteins assemble into multimeric protein complexes, which are involved in maintaining the transcriptional repressive state of genes throughout development. PHC1 (*polyhomeotic* homolog 1), also known as EDR1, HPH1 or RAE28, is a 1,004 amino acid nuclear protein that is a component of the PcG multiprotein PRC1 complex. Specifically, the PcG PRC1 complex modifies histones, remodels chromatin and mediates monoubiquitination of Histone H2A. Other constituent proteins involved in the PcG PRC1 complex are Mel-18, Bmi-1, M33, MPc2, MPc3, RING1, Ring1b, as well as several others. Existing as a homodimer, PHC1 contains one FCS-type zinc finger and a SAM (sterile α motif) domain. PHC1 is encoded by a gene located on human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

1. Tonkin, E., et al. 2002. Identification and characterisation of novel mammalian homologues of *Drosophila polyhomeotic* permits new insights into relationships between members of the polyhomeotic family. *Hum. Genet.* 111: 435-442.
2. Levine, S.S., et al. 2002. The core of the Polycomb repressive complex is compositionally and functionally conserved in flies and humans. *Mol. Cell Biol.* 22: 6070-6078.
3. Otte, A.P. and Kwaks, T.H. 2003. Gene repression by Polycomb group protein complexes: a distinct complex for every occasion? *Curr. Opin. Genet. Dev.* 13: 448-454.
4. Isono, K., et al. 2005. Mammalian polyhomeotic homologues PHC2 and Phc1 act in synergy to mediate Polycomb repression of Hox genes. *Mol. Cell Biol.* 25: 6694-6706.

CHROMOSOMAL LOCATION

Genetic locus: PHC1 (human) mapping to 12p13.31; Phc1 (mouse) mapping to 6 F1.

SOURCE

PHC1 (D-10) is a mouse monoclonal antibody raised against amino acids 565-643 mapping within an internal region of PHC1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PHC1 (D-10) is available conjugated to agarose (sc-390880 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390880 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390880 PE), fluorescein (sc-390880 FITC), Alexa Fluor[®] 488 (sc-390880 AF488), Alexa Fluor[®] 546 (sc-390880 AF546), Alexa Fluor[®] 594 (sc-390880 AF594) or Alexa Fluor[®] 647 (sc-390880 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390880 AF680) or Alexa Fluor[®] 790 (sc-390880 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PHC1 (D-10) is recommended for detection of PHC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for PHC1 siRNA (h): sc-95881, PHC1 siRNA (m): sc-152203, PHC1 shRNA Plasmid (h): sc-95881-SH, PHC1 shRNA Plasmid (m): sc-152203-SH, PHC1 shRNA (h) Lentiviral Particles: sc-95881-V and PHC1 shRNA (m) Lentiviral Particles: sc-152203-V.

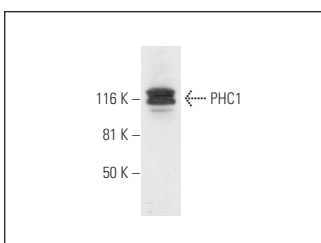
Molecular Weight of PHC1: 106 kDa.

Positive Controls: F9 cell lysate: sc-2245.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



PHC1 (D-10): sc-390880. Western blot analysis of PHC1 expression in F9 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wu, Y., et al. 2022. CBX8 together with SET facilitates ovarian carcinoma growth and metastasis by suppressing the transcription of SUSD2. *Mol. Cancer Res.* 20: 1611-1622.

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.