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PHC3 Antibody

Catalog # ASC11737

Product Information

Application	WB, E
Primary Accession	Q8NDX5
Other Accession	NP_079223, 148612879
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	106162
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PHC3 antibody can be used for detection of PHC3 by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	80012
Other Names	Polyhomeotic-like protein 3, Early development regulatory protein 3, Homolog of polyhomeotic 3, hPH3, PHC3, EDR3, PH3
Target/Specificity	PHC3; PHC3 antibody is human, mouse and rat specific. At least six isoforms of PHC3 are known to exist.
Reconstitution & Storage	PHC3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	PHC3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PHC3
Synonyms	EDR3, PH3
Function	Component of a Polycomb group (PcG) multiprotein PRC1-like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development. PcG PRC1 complex acts via chromatin remodeling and modification of histones; it mediates monoubiquitination of histone H2A 'Lys-119', rendering chromatin heritably changed in its expressibility.
Cellular Location	Nucleus

Background

Polycomb group (PcG) proteins assemble into multimeric protein complexes, which are involved in maintaining the transcriptional repressive state of genes throughout development (1). PHC3 (Polyhomeotic-like protein 3), also known as Early development regulatory protein 3, is a 983 amino acid nuclear protein that is a component of the PcG multiprotein PRC1 complex (2). PRC1 complex acts via chromatin remodeling and modification of histones. PHC3 contains 1 FCS-type zinc finger and SAM (sterile alpha motif) domain (2-3). PHC 3 has been regarded as a candidate tumor suppressor of osteosarcoma (4).

References

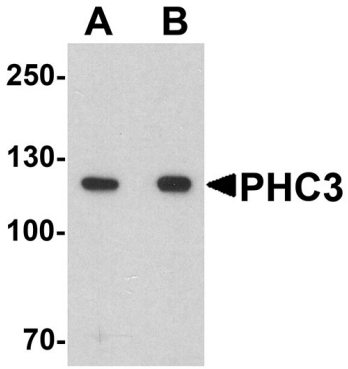
Valk-Lingbeek ME, Bruggeman SW, and Van Lohuizen M. Stem cells and cancer; the polycomb connection. Cell 2004; 118:409–18.

Deshpande AM, Akunowicz JD, Reveles XT, et al. PHC3, a component of the hPRC-H complex, associates with E2F6 during G0 and is lost in osteosarcoma tumors. Oncogene 2007; 26:1714-22.

Isono K, Fujimura Y, Shinga J, et al. Mammalian polyhomeotic homologues Phc2 and Phc1 act in synergy to mediate polycomb repression of Hox genes. Mol. Cell Biol. 2005; 25:6694-706.

Iwata S, Takenobu H, Kageyama H, et al. Polycomb group molecule PHC3 regulates polycomb complex composition and prognosis of osteosarcoma. Cancer Sci. 2010; 101:1646-52.

Images



Western blot analysis of PHC3 in 3T3 cell lysate with PHC3 antibody at (A) 1 and (B) 2 µg/ml.