

PHF14 Antibody

Catalog # ASC11702

Product Information

Application	WB, IF, E
Primary Accession	O94880
Other Accession	NP_055475 , 55769548
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	106986
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PHF14 antibody can be used for detection of PHF14 by Western blot at 1 - 2 μ g/ml.

Additional Information

Gene ID	9678
Other Names	PHD finger protein 14, PHF14, KIAA0783
Target/Specificity	PHF14; PHF14 antibody is human, mouse and rat reactive. Multiple isoforms of PHF14 are known to exist.
Reconstitution & Storage	PHF14 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	PHF14 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PHF14
Synonyms	KIAA0783
Function	Histone-binding protein (PubMed: 23688586). Binds preferentially to unmodified histone H3 but can also bind to a lesser extent to histone H3 trimethylated at 'Lys-9' (H3K9me3) as well as to histone H3 monomethylated at 'Lys-27' (H3K27ac) and trimethylated at 'Lys-27' (H3K27me3) (By similarity). Represses PDGFRA expression, thus playing a role in regulation of mesenchymal cell proliferation (By similarity). Suppresses the expression of CDKN1A/p21 by reducing the level of trimethylation of histone H3 'Lys-4', leading to enhanced proliferation of germinal center B cells (By similarity).
Cellular Location	[Isoform 1]: Nucleus. Chromosome. Note=Mainly localized in the nucleus of

interphase cells. In mitotic cells, colocalizes with condensed chromatin during metaphase and anaphase.

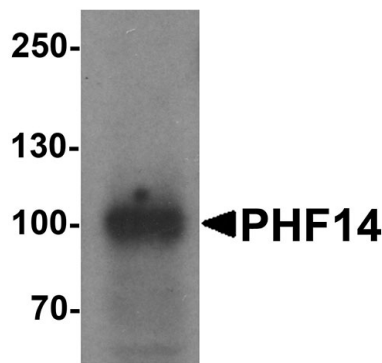
Background

PHF14, a novel plant homology domain (PHD) transcription factor, controls the proliferation of mesenchymal cells by regulating PDGFR alpha expression in embryonic development (1). PHD finger transcription factors are concerned with transcriptional regulation by interacting with modified histones (2), and dysregulation of several genes encoding PHD finger transcription factors, such as ING1 and RBP2, has been found in human cancer diseases suggesting these factors have an important role for cancer cell proliferation. PHF14 is a potential target for new treatments of lung fibrosis (1, 3).

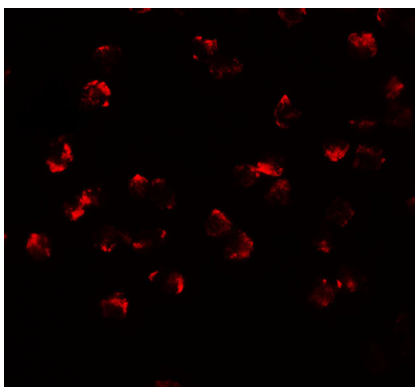
References

Kitagawa M, Takebe A, Ono Y, et al. Phf14, a novel regulator of mesenchyme growth via platelet-derived growth factor (PDGF) receptor- α . *J. Biol. Chem.* 2012; 287:27983-96.
Musco G and Peterson P. PHD finger of autoimmune regulator: an epigenetic link between the histone modifications and tissue-specific antigen expression in thymus. *Epigenetics* 2008; 3:310-4.
Musselman CA and Kutateladze TG. PHD fingers: epigenetic effectors and potential drug targets. *Mol. Interv.* 2009; 9:314-23.

Images



Western blot analysis of PHF14 in 293 cell lysate with PHF14 antibody at 1 μ g/ml.



Immunofluorescence of PHF14 in 293 cells with PHF14 antibody at 5 μ g/mL.

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