

PHF6 (H-4): sc-365237

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. PHF6 (PHD finger protein 6), also known as BORJ, is a 365 amino acid protein that localizes to the nucleus and contains two PHD-type zinc fingers. Expressed ubiquitously, PHF6 exists as two alternatively spliced isoforms and is thought to play a role in transcriptional regulation. Upon DNA damage, PHF6 is subject to phosphorylation, probably by ATM or ATR. Mutations in the gene encoding PHF6 are the cause of Boerjeson-Forsman-Lehmann syndrome (BFLS), an X-linked recessive disorder that is characterized by mental retardation, epilepsy, hypogonadism, hypometabolism, obesity with marked gynecomastia, swelling of subcutaneous tissue of the face and narrow palpebral fissure.

CHROMOSOMAL LOCATION

Genetic locus: PHF6 (human) mapping to Xq26.2; Phf6 (mouse) mapping to X A5.

SOURCE

PHF6 (H-4) is a mouse monoclonal antibody raised against a peptide mapping within an internal region of PHF6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PHF6 (H-4) is available conjugated to agarose (sc-365237 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365237 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365237 PE), fluorescein (sc-365237 FITC), Alexa Fluor® 488 (sc-365237 AF488), Alexa Fluor® 546 (sc-365237 AF546), Alexa Fluor® 594 (sc-365237 AF594) or Alexa Fluor® 647 (sc-365237 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365237 AF680) or Alexa Fluor® 790 (sc-365237 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PHF6 (H-4) is recommended for detection of PHF6 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 PHF6 siRNA (h): sc-90882, PHF6 siRNA (m): sc-152219, PHF6 shRNA Plasmid (h): sc-90882-SH, PHF6 shRNA Plasmid (m): sc-152219-SH, PHF6 shRNA (h) Lentiviral Particles: sc-90882-V and PHF6 shRNA (m) Lentiviral Particles: sc-152219-V.

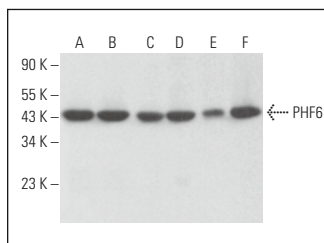
Molecular Weight of PHF6 isoforms: 41/35 kDa.

Positive Controls: A2058 whole cell lysate: sc-364178, HEL 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203.

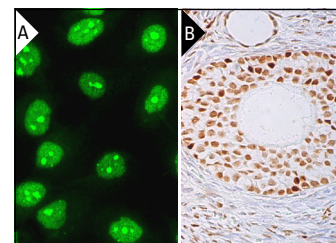
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PHF6 (H-4): sc-365237. Western blot analysis of PHF6 expression in K-562 (A), HEL 92.1.7 (B), A2058 (C), ALL-SIL (D), MOLT-4 (E) and CCRF-CEM (F) whole cell lysates.



PHF6 (H-4): sc-365237. Immunofluorescence staining of formalin-fixed A-431 cells showing nucleolar and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear staining of follicle cells and ovarian stroma cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (B).

SELECT PRODUCT CITATIONS

- Elkashaf, S.M., et al. 2017. IDH mutation, competitive inhibition of FTO, and RNA methylation. *Cancer Cell* 31: 619-620.
- Morgan, M.A.J., et al. 2017. A cryptic Tudor domain links BRWD2/PHIP to COMPASS-mediated Histone H3K4 methylation. *Genes Dev.* 31: 2003-2014.
- Bremmer, F., et al. 2019. Proteomic comparison of malignant human germ cell tumor cell lines. *Dis. Markers* 2019: 8298524.
- Fliedner, A., et al. 2020. Loss of PHF6 leads to aberrant development of human neuron-like cells. *Sci. Rep.* 10: 19030.

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.

PROTOCOLS

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