SANTA CRUZ BIOTECHNOLOGY, INC.

PHF6 (G-9): sc-271767

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 2 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-Forssman-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.

REFERENCES

1. Borjeson, M., et al. 1962. An X-linked, recessively inherited syndrome characterized by grave mental deficiency, epilepsy, and endocrine disorder. Acta Med. Scand. 171: 13-21.
2. Lower, K.M., et al. 2002. Mutations in PHF6 are associated with Börjeson-Forssman-Lehmann syndrome. Nat. Genet. 32: 661-665.
3. Lower, K.M., et al. 2004. 1024C>T (R342X) is a recurrent PHF6 mutation also found in the original Borjeson-Forssman-Lehmann syndrome family. Eur. J. Hum. Genet. 12: 787-789.
4. Vallée, D., et al. 2004. A novel PHF6 mutation results in enhanced exon skipping and mild Börjeson-Forssman-Lehmann syndrome. J. Med. Genet. 41: 778-783.
5. Crawford, J., et al. 2006. Mutation screening in Borjeson-Forssman-Lehmann syndrome: identification of a novel *de novo* PHF6 mutation in a female patient. J. Med. Genet. 43: 238-243.
6. Vo s, A.K., et al. 2007. Protein and gene expression analysis of PHF6, the gene mutated in the Börjeson-Forssman-Lehmann syndrome of intellectual disability and obesity. Gene Expr. Patterns 7: 858-871.

CHROMOSOMAL LOCATION

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

SOURCE

PHF6 (G-9) is a mouse monoclonal antibody raised against synthetic PHF6 peptide of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

HF6 (G-9) is recommended for detection of PHF6 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) 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.

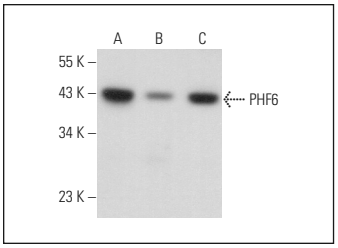
Molecular Weight of PHF6 isoforms: 41/35 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, C6 whole cell lysate: sc-364373 or Neuro-2A whole cell lysate: sc-364185.

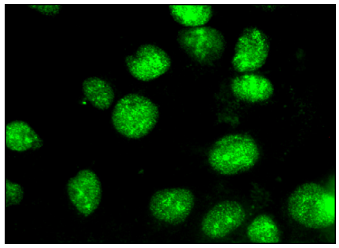
RECOMMENDED SUPPORT REAGENTS

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.

DATA



PHF6 (G-9): sc-271767. Western blot analysis of PHF6 expression in NIH/3T3 (**A**), Neuro-2A (**B**) and C6 (**C**) whole cell lysates.



PHF6 (G-9): sc-271767. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nucleolar and nuclear localization.

SELECT PRODUCT CITATIONS

1. Park, H.J., et al. 2018. 3' UTR shortening represses tumor-suppressor genes in trans by disrupting ceRNA crosstalk. Nat. Genet. 50: 783-789.
2. Chu, Y., et al. 2019. Nudt21 regulates the alternative polyadenylation of Pak1 and is predictive in the prognosis of glioblastoma patients. Oncogene 38: 4154-4168.

RESEARCH USE

For research use only, not for use in diagnostic procedures.