SANTA CRUZ BIOTECHNOLOGY, INC.

PHF5A (FL-110): sc-98487

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The Power to Question

BACKGROUND

PHF5A (PHD finger protein 5A), also known as SF3b14b or INI, is a 110 amino acid protein that contains one PHD finger-like domain and localizes to the nucleus. One of several members of the PHD finger superfamily, PHF5A functions as a subunit of the SF3A splicing factor complex, a heterotrimeric complex comprised of multiple subunits that act in tandem to mediate the binding of U2 snRNP to the branchpoint sequence (BPS) in pre-mRNA. The SF3A complex is necessary for the conversion of 15S U2 snRNP into the active 17S protein that performs directly in pre-mRNA splicing events. In conjunction with other members of the SF3A complex, PHF5A plays an important role in mediating pre-mRNA splicing and transcription. The gene encoding PHF5A maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome.

REFERENCES

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2. Will, C.L., Urlaub, H., Achsel, T., Gentzel, M., Wilm, M. and Lührmann, R. 2002. Characterization of novel SF3b and 17S U2 snRNP proteins, including a human Prp5p homologue and an SF3b DEAD-box protein. EMBO J. 21: 4978-4988.
3. Zhou, Z., Licklider, L.J., Gygi, S.P. and Reed, R. 2002. Comprehensive proteomic analysis of the human spliceosome. Nature 419: 182-185.
4. Will, C.L., Schneider, C., Hossbach, M., Urlaub, H., Rauhut, R., Elbashir, S., Tuschl, T. and Lührmann, R. 2004. The human 18S U11/U12 snRNP contains a set of novel proteins not found in the U2-dependent spliceosome. RNA 10: 929-941.
5. Rzymski, T., Grzmil, P., Meinhardt, A., Wolf, S. and Burfeind, P. 2008. PHF5A represents a bridge protein between splicing proteins and ATP-dependent helicases and is differentially expressed during mouse spermatogenesis. Cytogenet. Genome Res. 121: 232-244.
6. Kuwasako, K., Dohmae, N., Inoue, M., Shirouzu, M., Taguchi, S., Güntert, P., Seraphin, B., Muto, Y. and Yokoyama, S. 2008. Complex assembly mechanism and an RNA-binding mode of the human p14-SF3b155 spliceosomal protein complex identified by NMR solution structure and functional analyses. Proteins 71: 1617-1636.

CHROMOSOMAL LOCATION

Genetic locus: PHF5A (human) mapping to 22q13.2; Phf5a (mouse) mapping to 15 E1.

SOURCE

PHF5A (FL-110) is a rabbit polyclonal antibody raised against amino acids 1-110 representing full length PHF5A of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PHF5A (FL-110) is recommended for detection of PHF5A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

PHF5A (FL-110) is also recommended for detection of PHF5A in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for PHF5A siRNA (h): sc-76119, PHF5A siRNA (m): sc-76120, PHF5A shRNA Plasmid (h): sc-76119-SH, PHF5A shRNA Plasmid (m): sc-76120-SH, PHF5A shRNA (h) Lentiviral Particles: sc-76119-V and PHF5A shRNA (m) Lentiviral Particles: sc-76120-V.

Molecular Weight of PHF5A: 12 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.