BPTF (2343C3a): sc-81088



The Power to Question

BACKGROUND

BPTF (nucleosome-remodeling factor subunit BPTF, Bromodomain and PHD finger-containing transcription factor) is a 2,907 amino acid protein encoded by the human gene BPTF. BPTF belongs to the PBTF family and contains one bromo domain, one DDT domain and two PHD-type zinc fingers. BPTF acts as a histone-binding component of NURF (nucleosome-remodeling factor). The NURF complex, which consists of SMARCA1, BPTF, RbAp46 and RbAp48, acts to catalyze ATP-dependent nucleosome sliding and facilitates transcription of chromatin. It specifically recognizes histone H3 tails trimethylated on "Lys-4" (H3-K4Me3), which mark transcription start sites of virtually all active genes. BPTF may also help regulate transcription through direct binding to DNA or transcription factors.

REFERENCES

- 1. Jordan-Sciutto, K.L., Dragich, J.M., Rhodes, J.L. and Bowser, R. 2000. Fetal Alz-50 clone 1, a novel zinc finger protein, binds a specific DNA sequence and acts as a transcriptional regulator. J. Biol. Chem. 274: 35262-35268.
- Jordan-Sciutto, K.L., Dragich, J.M., Caltagarone, J., Hall, D.J. and Bowser, R. 2000. Fetal Alz-50 clone 1 (FAC1) protein interacts with the Myc-associated zinc finger protein (ZF87/MAZ) and alters its transcriptional activity. Biochemistry 39: 3206-3215.
- 3. Strachan, G.D., Morgan, K.L., Otis, L.L., Caltagarone, J., Gittis, A., Bowser, R. and Jordan-Sciutto, K.L. 2004. Fetal Alz-50 clone 1 interacts with the human orthologue of the Kelch-like Ech-associated protein. Biochemistry 43: 12113-12122.
- 4. Olsen, J.V., Blagoev, B., Gnad, F., Macek, B., Kumar, C., Mortensen, P. and Mann, M. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
- Wysocka, J., Swigut, T., Xiao, H., Milne, T.A., Kwon, S.Y., Landry, J., Kauer, M., Tackett, A.J., Chait, B.T., Badenhorst, P., Wu, C. and Allis, C.D. 2006. A PHD finger of NURF couples histone H3 lysine 4 trimethylation with chromatin remodelling. Nature 442: 86-90.
- 6. Li, H., Ilin, S., Wang, W., Duncan, E.M., Wysocka, J., Allis, C.D. and Patel, D.J. 2006. Molecular basis for site-specific read-out of histone H3K4me3 by the BPTF PHD finger of NURF. Nature 442: 91-95.
- 7. Matsuoka, S., Ballif, B.A., Smogorzewska, A., Hurov, K.E., Luo, J., Bakalarski, C.E., Zhao, Z., Solimini, N., Lerenthal, Y., Shiloh, Y., Gygi, S.P. and Elledge, S.J. 2007. Atm and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. Science 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: BPTF (human) mapping to 17q24.2.

SOURCE

BPTF (2343C3a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of BPTF of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μg lgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

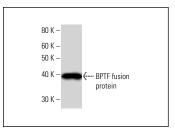
APPLICATIONS

BPTF (2343C3a) is recommended for detection of BPTF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for BPTF siRNA (h): sc-93894, BPTF shRNA Plasmid (h): sc-93894-SH and BPTF shRNA (h) Lentiviral Particles: sc-93894-V.

Molecular Weight of BPTF: 325 kDa.

DATA



BPTF (2343C3a): sc-81088 Western Blot analysis of human recombinant BPTF fusion protein.

STORAGE

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

PROTOCOLS

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

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