

# ATF-7IP (H-300): sc-98375

## BACKGROUND

ATF-7IP (activating transcription factor 7-interacting protein 1, MBD1-containing chromatin-associated factor 1) is a 1,270 amino acid protein encoded by the human gene ATF7IP. ATF-7IP can act both as an activator or a repressor depending on the context. ATF-7IP functions as a recruiter that couples transcriptional factors to general transcription apparatus and thereby modulates transcription regulation and chromatin formation. It mediates MBD1-dependent transcriptional repression, probably by recruiting complexes containing SETDB1. ATF-7IP is required to stimulate the histone methyltransferase activity of SETDB1 and it facilitates the conversion of dimethylated to trimethylated H3 Lys-9. The complex formed by ATF-7IP, MBD1 and SETDB1 also acts to couple DNA methylation to histone Lys-9 trimethylation.

## REFERENCES

1. De Graeve, F., Bahr, A., Chatton, B. and Kedinger, C. 2000. A murine ATF $\alpha$ -associated factor with transcriptional repressing activity. *Oncogene* 19: 1807-1819.
2. Wang, H., An, W., Cao, R., Xia, L., Erdjument-Bromage, H., Chatton, B., Tempst, P., Roeder, R.G. and Zhang, Y. 2003. mAM facilitates conversion by ESET of dimethyl to trimethyl Lysine 9 of Histone H3 to cause transcriptional repression. *Mol. Cell* 12: 475-487.
3. Ichimura, T., Watanabe, S., Sakamoto, Y., Aoto, T., Fujita, N. and Nakao, M. 2005. Transcriptional repression and heterochromatin formation by MBD1 and MCAF/AM family proteins. *J. Biol. Chem.* 280: 13928-13935.
4. Chang, L.K., Chung, J.Y., Hong, Y.R., Ichimura, T., Nakao, M. and Liu, S.T. 2005. Activation of Sp1-mediated transcription by Rta of Epstein-Barr virus via an interaction with MCAF1. *Nucleic Acids Res.* 33: 6528-6539.
5. Uchimura, Y., Ichimura, T., Uwada, J., Tachibana, T., Sugahara, S., Nakao, M. and Saitoh, H. 2006. Involvement of SUMO modification in MBD1- and MCAF1-mediated heterochromatin formation. *J. Biol. Chem.* 281: 23180-23190.
6. McGraw, S., Vigneault, C. and Sirard, M.A. 2007. Temporal expression of factors involved in chromatin remodeling and in gene regulation during early bovine *in vitro* embryo development. *Reproduction* 133: 597-608.
7. Ichimura, T. and Ito, T. 2007. Nuclear atypia and epigenetic change. *Tanpakushitsu Kakusan Koso* 51: 2049-2051.

## CHROMOSOMAL LOCATION

Genetic locus: ATF7IP (human) mapping to 12p13.1.

## SOURCE

ATF-7IP (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of ATF-7IP of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

ATF-7IP (H-300) is recommended for detection of ATF-7IP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 ATF-7IP siRNA (h): sc-96134, ATF-7IP shRNA Plasmid (h): sc-96134-SH and ATF-7IP shRNA (h) Lentiviral Particles: sc-96134-V.

Molecular Weight of ATF-7IP: 137 kDa.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


 MONOS  
Satisfaction  
Guaranteed

Try **ATF-7IP (C-1): sc-166753** or **ATF-7IP (E-6): sc-514220**, our highly recommended monoclonal alternatives to ATF-7IP (H-300).