

# ATF-7IP (P-13): sc-107442

## 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 both act 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

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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.

## CHROMOSOMAL LOCATION

Genetic locus: ATF7IP (human) mapping to 12p13.1; Atf7ip (mouse) mapping to 6 G1.

## SOURCE

ATF-7IP (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-107442 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

ATF-7IP (P-13) is recommended for detection of ATF-7IP of mouse, rat and 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); non cross-reactive with other ATF family members.

Suitable for use as control antibody for ATF-7IP siRNA (h): sc-96134, ATF-7IP siRNA (m): sc-141319, ATF-7IP shRNA Plasmid (h): sc-96134-SH, ATF-7IP shRNA Plasmid (m): sc-141319-SH, ATF-7IP shRNA (h) Lentiviral Particles: sc-96134-V and ATF-7IP shRNA (m) Lentiviral Particles: sc-141319-V.

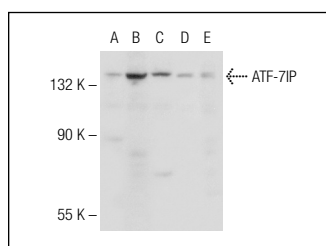
Molecular Weight of ATF-7IP: 137 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or A549 cell lysate: sc-2413.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



ATF-7IP (P-13): sc-107442. Western blot analysis of ATF-7IP expression in HeLa (A), Jurkat (B), A549 (C), MCF7 (D) and SK-N-MC (E) nuclear extracts.

## RESEARCH USE

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

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Try **ATF-7IP (C-1): sc-166753** or **ATF-7IP (E-6): sc-514220**, our highly recommended monoclonal alternatives to ATF-7IP (P-13).