

NAT-10 (D-11): sc-271771

BACKGROUND

NAT-10 (N-acetyltransferase 10) is a nuclear protein that belongs to the UPF0202 family. It has a single N-acetyltransferase domain that likely functions as a histone acetyltransferase. NAT-10 functions primarily to regulate the activity of telomerase. It is upregulated in response to DNA damage and is likely to take part in genotoxic resistance and DNA repair. NAT-10 has a high binding potential for the promoter region of TERT which stimulates the production of telomerase. These varieties of function imply that human telomerase complexes have multiple functions rather than specific duties.

REFERENCES

1. Lv, J., et al. 2003. Molecular cloning of a novel human gene encoding histone acetyltransferase-like protein involved in transcriptional activation of hTERT. *Biochem. Biophys. Res. Commun.* 311: 506-513.
2. Liu, H.J., et al. 2005. An analysis of induced expression and function of telomerase-regulation associated hALP gene on genotoxic agents. *Zhonghua Bing Li Xue Za Zhi* 34: 732-736.
3. Fu, D. and Collins, K. 2007. Purification of human telomerase complexes identifies factors involved in telomerase biogenesis and telomere length regulation. *Mol. Cell* 28: 773-785.
4. Chi, Y.H., et al. 2007. Histone acetyltransferase hALP and nuclear membrane protein hSUN1 function in de-condensation of mitotic chromosomes. *J. Biol. Chem.* 282: 27447-27458.
5. Liu, H., et al. 2007. DNA damage induces N-acetyltransferase NAT10 gene expression through transcriptional activation. *Mol. Cell. Biochem.* 300: 249-258.

CHROMOSOMAL LOCATION

Genetic locus: NAT10 (human) mapping to 11p13; Nat10 (mouse) mapping to 2 E2.

SOURCE

NAT-10 (D-11) is a mouse monoclonal antibody raised against amino acids 726-1025 mapping at the C-terminus of NAT-10 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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.

PROTOCOLS

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

APPLICATIONS

NAT-10 (D-11) is recommended for detection of NAT-10 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), immunohistochemistry (including paraffin-embedded sections) (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 NAT-10 siRNA (h): sc-62660, NAT-10 siRNA (m): sc-62661, NAT-10 shRNA Plasmid (h): sc-62660-SH, NAT-10 shRNA Plasmid (m): sc-62661-SH, NAT-10 shRNA (h) Lentiviral Particles: sc-62660-V and NAT-10 shRNA (m) Lentiviral Particles: sc-62661-V.

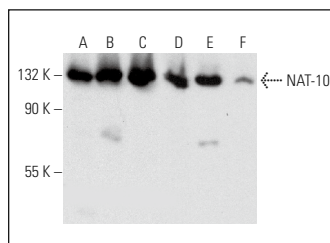
Molecular Weight of NAT-10: 116 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

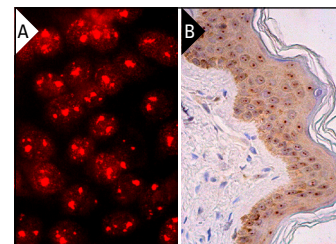
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NAT-10 (D-11): sc-271771. Western blot analysis of NAT-10 expression in HeLa nuclear extract (A) and MCF7 (B), Jurkat (C), SP2/0 (D), F9 (E) and NRK (F) whole cell lysates.



NAT-10 (D-11): sc-271771. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing nucleolar staining of epidermal cells, keratinocytes and melanocytes (B).

RESEARCH USE

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