

NAT-10 (D-5): sc-271142

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., Liu, H., Wang, Q., Tang, Z., Hou, L. and Zhang, B. 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., Ling, Y., Hou, L. and Zhang, B. 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., Haller, K. and Jeang, K.T. 2007. Histone acetyltransferase hALP and nuclear membrane protein hsSUN1 function in de-condensation of mitotic chromosomes. *J. Biol. Chem.* 282: 27447-27458.
5. Liu, H., Ling, Y., Gong, Y., Sun, Y., Hou, L. and Zhang, B. 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-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 719-752 within an internal region of NAT-10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271142 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

NAT-10 (D-5) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NAT-10 (D-5) is also recommended for detection of NAT-10 in additional species, including equine, canine, bovine, porcine and avian.

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.

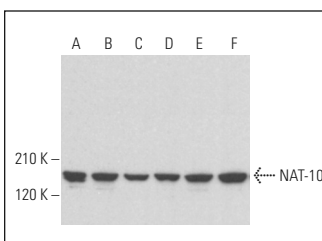
Molecular Weight of NAT-10: 116 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or WEHI-231 whole cell lysate: sc-2213.

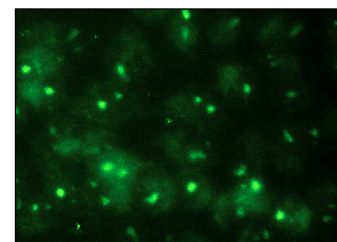
RECOMMENDED SUPPORT REAGENTS

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.

DATA



NAT-10 (D-5): sc-271142. Western blot analysis of NAT-10 expression in Jurkat (A), CCRF-CEM (B), WEHI-231 (C), MEG-01 (D), K-562 (E) and HEL 92.1.7 (F) whole cell lysates.



NAT-10 (D-5): sc-271142. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar and nuclear localization.

RESEARCH USE

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

PROTOCOLS

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