SANTA CRUZ BIOTECHNOLOGY, INC.

CNOT3 (D-21): sc-133471

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

CNOT3 is a widely expressed subunit of the CCR4-NOT transcription complex and belongs to the CNOT2/3/5 family. The CCR4-NOT complex is an evolutionarily conserved, multi-component complex known to be involved in transcription as well as mRNA degradation. Various subunits (e.g. CNOT1, CNOT3) are involved in influencing nuclear hormone receptor activities. The CCR4-NOT complex is also involved in the regulation of Histone H3 Lysine 4 methylation through a ubiquitin-dependent pathway that likely involves the proteasome. Similar to CNOT2, CNOT3 contains the specialized protein motif NOT-Box. This conserved motif confers a transcription repression function to CNOT3. Repression by the NOT-Box is sensitive to treatment with the histone deacetylase (HDAC) inhibitor trichostatin A.

REFERENCES

1. Albert, T.K., Lemaire, M., van Berkum, N.L., Gentz, R., Collart, M.A. and Timmers, H.T. 2000. Isolation and characterization of human orthologs of yeast CCR4-NOT complex subunits. Nucleic Acids Res. 28: 809-817.
2. Wende, H., Volz, A. and Ziegler, A. 2000. Extensive gene duplications and a large inversion characterize the human leukocyte receptor cluster. Immunogenetics 51: 703-713.
3. Aoki, T., Okada, N., Wakamatsu, T. and Tamura, T.A. 2002. TBP-interacting protein 120B, which is induced in relation to myogenesis, binds to NOT3. Biochem. Biophys. Res. Commun. 296: 1097-1103.
4. Yin, X., Warner, D.R., Roberts, E.A., Pisano, M.M. and Greene, R.M. 2005. Identification of novel CBP interacting proteins in embryonic orofacial tissue. Biochem. Biophys. Res. Commun. 329: 1010-1017.
5. Laribee, R.N., Shibata, Y., Mersman, D.P., Collins, S.R., Kemmeren, P., Roguev, A., Weissman, J.S., Briggs, S.D., Krogan, N.J. and Strahl, B.D. 2007. CCR4/NOT complex associates with the proteasome and regulates histone methylation. Proc. Natl. Acad. Sci. USA 104: 5836-5841.
6. Garapaty, S.R., Mahajan, M.A. and Samuels, H.H. 2008. Components of the CCR4-not complex function as nuclear hormone receptor coactivators via association with the NRC interacting factor, NIF-1. J. Biol. Chem. 283: 6806-6816.

CHROMOSOMAL LOCATION

Genetic locus: CNOT3 (human) mapping to 19q13.42; Cnot3 (mouse) mapping to 7 A1.

SOURCE

CNOT3 (D-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic CNOT3 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

CNOT3 (D-21) is recommended for detection of CNOT3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CNOT3 siRNA (h): sc-72939, CNOT3 siRNA (m): sc-72940, CNOT3 shRNA Plasmid (h): sc-72939-SH, CNOT3 shRNA Plasmid (m): sc-72940-SH, CNOT3 shRNA (h) Lentiviral Particles: sc-72939-V and CNOT3 shRNA (m) Lentiviral Particles: sc-72940-V.

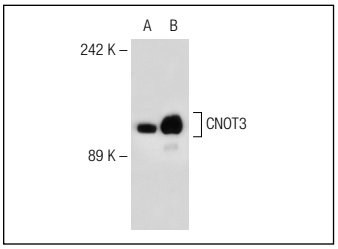
Molecular Weight of CNOT3 isoforms: 59/64/82/116 kDa.

Positive Controls: CNOT3 (h): 293 Lysate: sc-111031, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

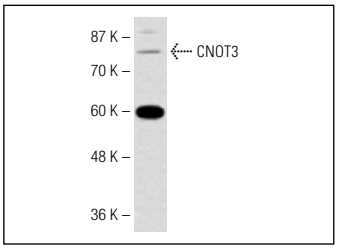
RECOMMENDED SECONDARY REAGENTS

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).

DATA



CNOT3 (D-21): sc-133471. Western blot analysis of CNOT3 expression in non-transfected: sc-110760 (**A**) and human CNOT3 transfected: sc-111031 (**B**) 293 whole cell lysates.



CNOT3 (D-21): sc-133471. Western blot analysis of CNOT3 expression in Jurkat whole cell lysate.

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 or our catalog for detailed protocols and support products.