

CNOT4 (O-23): sc-130728

BACKGROUND

The CCR4-NOT complex is an evolutionarily conserved, multi-component complex known to be involved in transcription as well as mRNA degradation. Various subunits within the complex 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. CNOT4 (CCR4-NOT transcription complex subunit 4), also known as CCR4-associated factor 4 and E3 ubiquitin-protein ligase CNOT4, is a 575 amino acid protein that is a subunit of the CCR4-NOT complex. CNOT4 contains one C3H1-type zinc finger, one RING-type zinc finger and one RRM (RNA recognition motif) domain. Via its RING domain, CNOT4 binds E2 ubiquitin ligases. CNOT4 functions as a UbcH5B-dependent ubiquitin-protein ligase (E3 ligase). There are eight isoforms of CNOT4 that are expressed as a result of alternative splicing events.

REFERENCES

1. Albert, T.K., et al. 2000. Isolation and characterization of human orthologs of yeast CCR4-NOT complex subunits. *Nucleic Acids Res.* 28: 809-817.
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3. Albert, T.K., et al. 2002. Identification of a ubiquitin-protein ligase subunit within the CCR4-NOT transcription repressor complex. *EMBO J.* 21: 355-364.
4. Dominguez, C., et al. 2004. Structural model of the UbcH5B/CNOT4 complex revealed by combining NMR, mutagenesis, and docking approaches. *Structure* 12: 633-644.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 604911. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Winkler, G.S. and Timmers, H.T. 2005. Structure-based approaches to create new E2-E3 enzyme pairs. *Meth. Enzymol.* 399: 355-366.
7. Mulder, K.W., et al. 2007. Modulation of Ubc4p/Ubc5p-mediated stress responses by the RING-finger-dependent ubiquitin-protein ligase Not4p in *Saccharomyces cerevisiae*. *Genetics* 176: 181-192.
8. Zhao, J.H., et al. 2008. RING domains functioning as E3 ligases reveal distinct structural features: a molecular dynamics simulation study. *J. Biomol. Struct. Dyn.* 26: 65-74.
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CHROMOSOMAL LOCATION

Genetic locus: CNOT4 (human) mapping to 7q33.

SOURCE

CNOT4 (O-23) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of CNOT4 of human origin.

PRODUCT

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

APPLICATIONS

CNOT4 (O-23) is recommended for detection of CNOT4 of 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 CNOT4 siRNA (h): sc-72941, CNOT4 shRNA Plasmid (h): sc-72941-SH and CNOT4 shRNA (h) Lentiviral Particles: sc-72941-V.

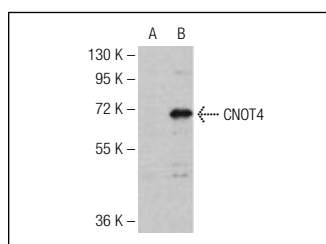
Molecular Weight of CNOT4: 64 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

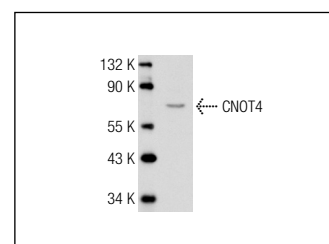
RECOMMENDED SECONDARY REAGENTS

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



CNOT4 (O-23): sc-130728. Western blot analysis of CNOT4 expression in non-transfected (A) and human CNOT4 transfected (B) 293 whole cell lysates.



CNOT4 (O-23): sc-130728. Western blot analysis of CNOT4 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.

RESEARCH USE

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

PROTOCOLS

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