

# CNOT4 (343CT14.6.5): sc-517324

## 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.
2. Hanzawa, H., et al. 2001. The structure of the C4C4 ring finger of human NOT4 reveals features distinct from those of C3HC4 RING fingers. *J. Biol. Chem.* 276: 10185-10190.
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. *Methods 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; Cnot4 (mouse) mapping to 6 B1.

## SOURCE

CNOT4 (343CT14.6.5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to CNOT4 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CNOT4 (343CT14.6.5) is recommended for detection of CNOT4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for CNOT4 siRNA (h): sc-72941, CNOT4 siRNA (m): sc-72942, CNOT4 shRNA Plasmid (h): sc-72941-SH, CNOT4 shRNA Plasmid (m): sc-72942-SH, CNOT4 shRNA (h) Lentiviral Particles: sc-72941-V and CNOT4 shRNA (m) Lentiviral Particles: sc-72942-V.

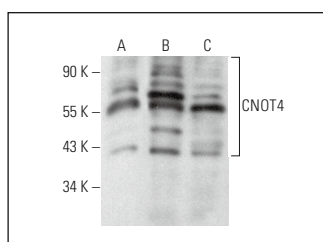
Molecular Weight of CNOT4: 64 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, Jurkat whole cell lysate: sc-2204 or MDA-MB-231 cell lysate: sc-2232.

## 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).

## DATA



CNOT4 (343CT14.6.5): sc-517324. Western blot analysis of CNOT4 expression in HEK293 (A), Jurkat (B) and MDA-MB-231 (C) whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.