

# CNOT2 (B-25): sc-133470

## BACKGROUND

CNOT2 (CCR4-NOT transcription complex subunit 2) is a ubiquitous protein encoded by the human gene CNOT2. CNOT2 belongs to the CNOT2/3/5 family and is part of the CCR4-NOT complex. 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, CNOT2) 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. Increased expression of the CNOT2 subunit acts to strongly repress transcription by RNA polymerase II. This repressive effect is mediated by a conserved NOT-Box, which is located at the C-terminus of CNOT2 proteins. Repression by the NOT-Box is sensitive to treatment with the histone deacetylase (HDAC) inhibitor trichostatin A.

## REFERENCES

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- Lemaire, L. and Kessel, M. 1998. Gastrulation and homeobox genes in chick embryos. *Mech. Dev.* 67: 3-16.
- Zwartjes, C.G., et al. 2004. Repression of promoter activity by CNOT2, a subunit of the transcription regulatory Ccr4-NOT complex. *J. Biol. Chem.* 279: 10848-10854.
- Lenssen, E., et al. 2004. The Ccr4-NOT complex independently controls both Msn2-dependent transcriptional activation—via a newly identified Glc7/Bud14 type I protein phosphatase module—and TFIID promoter distribution. *Mol. Cell. Biol.* 25: 488-498.
- Shi, J. and Nelson, M.A. 2005. The cyclin-dependent kinase 11 interacts with NOT2. *Biochem. Biophys. Res. Commun.* 334: 1310-1316.
- Winkler, G.S., et al. 2006. Human Ccr4-NOT complex is a ligand-dependent repressor of nuclear receptor-mediated transcription. *EMBO J.* 25: 3089-3099.
- Jayne, S., et al. 2006. Involvement of the SMRT/NCoR-HDAC3 complex in transcriptional repression by the CNOT2 subunit of the human Ccr4-NOT complex. *Biochem. J.* 398: 461-467.

## CHROMOSOMAL LOCATION

Genetic locus: CNOT2 (human) mapping to 12q15; Cnot2 (mouse) mapping to 10 D2.

## SOURCE

CNOT2 (B-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic CNOT2 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.

## APPLICATIONS

CNOT2 (B-25) is recommended for detection of CNOT2 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 CNOT2 siRNA (h): sc-72937, CNOT2 siRNA (m): sc-72938, CNOT2 shRNA Plasmid (h): sc-72937-SH, CNOT2 shRNA Plasmid (m): sc-72938-SH, CNOT2 shRNA (h) Lentiviral Particles: sc-72937-V and CNOT2 shRNA (m) Lentiviral Particles: sc-72938-V.

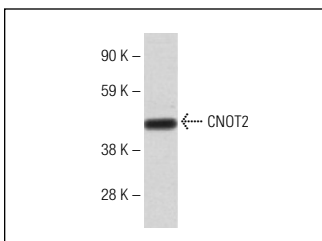
Molecular Weight of CNOT2 isoforms 1/2/3/4/5: 60/41/22/52/54 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or human fetal liver tissue extract.

## 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



CNOT2 (B-25): sc-133470. Western blot analysis of CNOT2 expression in human fetal liver tissue extract.

## 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.


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Try **CNOT2 (2191C2a): sc-81229**, our highly recommended monoclonal alternative to CNOT2 (B-25).