

# CNOT3 (2192C2a): sc-81230

## 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. Larabee, 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.

## SOURCE

CNOT3 (2192C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of CNOT3 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## RESEARCH USE

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

## APPLICATIONS

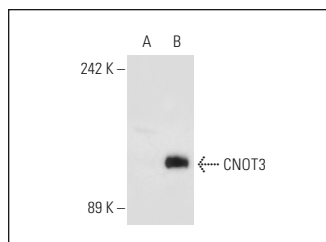
CNOT3 (2192C2a) is recommended for detection of CNOT3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

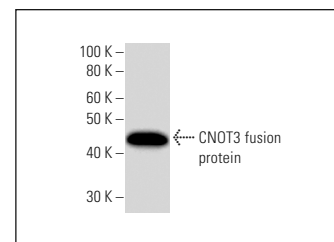
Molecular Weight of CNOT3 isoforms: 59/64/82/116 kDa.

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

## DATA



CNOT3 (2192C2a): sc-81230. Western blot analysis of CNOT3 expression in non-transfected: sc-110760 (A) and human CNOT3 transfected: sc-111031 (B) 293 whole cell lysates.



CNOT3 (2192C2a): sc-81230. Western Blot analysis of human recombinant CNOT3 fusion protein.

## SELECT PRODUCT CITATIONS

1. Slobodin, B., Bahat, A., Sehrawat, U., Becker-Herman, S., Zuckerman, B., Weiss, A.N., Han, R., Elkon, R., Agami, R., Ulitsky, I., Shachar, I. and Dikstein, R. 2020. Transcription dynamics regulate poly(A) tails and expression of the RNA degradation machinery to balance mRNA levels. *Mol. Cell.* E-published.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.