

CNOT6 (2193C2a): sc-81231

BACKGROUND

CNOT6 is a widely expressed subunit of the CCR4-NOT transcription 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, 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. CNOT6 belongs to the CCR4/nocturin family and contains three LRR (leucine-rich) repeats. In the cytoplasm, CNOT6 acts as a poly(A) nuclease involved in mRNA decay mediated by the major-protein-coding determinant of instability (mCRD) of the Fos gene.

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. Chen, J., et al. 2002. CCR4, a 3'-5' poly(A) RNA and ssDNA exonuclease, is the catalytic component of the cytoplasmic deadenylase. *EMBO J.* 21: 1414-1426.
3. Dupressoir, A., et al. 2003. Identification of four families of γ CCR4- and Mg^{2+} -dependent endonuclease-related proteins in higher eukaryotes, and characterization of orthologs of γ CCR4 with a conserved leucine-rich repeat essential for hCAF1/hPOP2 binding. *BMC Genomics* 2: 9.
4. Semotok, J.L., et al. 2005. Smaug recruits the CCR4/POP2/NOT deadenylase complex to trigger maternal transcript localization in the early *Drosophila* embryo. *Curr. Biol.* 15: 284-294.
5. Oh, J.H., et al. 2005. Transcriptome analysis of human gastric cancer. *Mamm. Genome* 16: 942-954.
6. Behm-Ansmant, I., et al. 2006. mRNA degradation by miRNAs and GW182 requires both CCR4-NOT deadenylase and DCP1:DCP2 decapping complexes. *Genes Dev.* 20: 1885-1898.
7. Fujitani, S., et al. 2007. Increased number of CCR4-positive cells in the duodenum of ovalbumin-induced food allergy model Nc/jic mice and antiallergic activity of fructooligosaccharides. *Allergol. Int.* 56: 131-138.
8. Laribee, R.N., et al. 2007. CCR4-NOT complex associates with the proteasome and regulates histone methylation. *Proc. Natl. Acad. Sci. USA* 104: 5836-5841.
9. Garapaty, S.R., et al. 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.

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 for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: CNOT6 (human) mapping to 5q35.3.

SOURCE

CNOT6 (2193C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of CNOT6 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

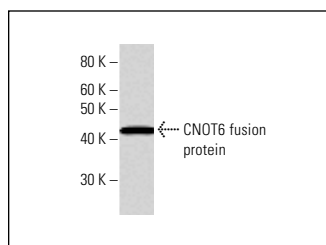
CNOT6 (2193C2a) is recommended for detection of CNOT6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for CNOT6 siRNA (h): sc-72944, CNOT6 shRNA Plasmid (h): sc-72944-SH and CNOT6 shRNA (h) Lentiviral Particles: sc-72944-V.

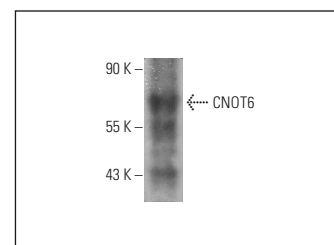
Molecular Weight of CNOT6: 63 kDa.

Positive Controls: human placenta extract: sc-363772.

DATA



CNOT6 (2193C2a): sc-81231. Western Blot analysis of human recombinant CNOT6 fusion protein.



CNOT6 (2193C2a): sc-81231. Western blot analysis of CNOT6 expression in human placenta tissue extract.

SELECT PRODUCT CITATIONS

1. Panasencko, O.O., et al. 2019. Co-translational assembly of proteasome subunits in NOT1-containing assemblyosomes. *Nat. Struct. Mol. Biol.* 26: 110-120.
2. Slobodin, B., et al. 2020. Transcription dynamics regulate poly(A) tails and expression of the RNA degradation machinery to balance mRNA levels. *Mol. Cell* 78: 434-444.e5.
3. Wu, A.C., et al. 2022. HDAC6 involves in regulating the lncRNA-microRNA-mRNA network to promote the proliferation of glioblastoma cells. *J. Exp. Clin. Cancer Res.* 41: 47.

RESEARCH USE

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