Revision 1

#40608 Store at -20C

CNOT3 (D4K4N) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	105	Rabbit IgG	#O75175	4849

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

CNOT3 (D4K4N) Rabbit mAb recognizes endogenous levels of total CNOT3 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CNOT3 protein.

Background

The evolutionarily conserved CCR4-NOT (CNOT) complex regulates mRNA metabolism in eukaryotic cells (1). This regulation occurs at different levels of mRNA synthesis and degradation, including transcription initiation, elongation, deadenylation, and degradation (1). Multiple components, including CNOT1, CNOT2, CNOT3, CNOT4, CNOT6, CNOT6L, CNOT7, CNOT8, CNOT9, and CNOT10 have been identified in this complex (2). In addition, subunit composition of this complex has been shown to vary among different tissues (3).
Research studies indicate that CNOT3 (along with CNOT1 and CNOT2) represses early developmental transcription factor expression, helping to maintain embryonic stem (ES) cell identity in mice and humans (4). Additional studies suggest that CNOT3 plays a role in mitotic progression as it destabilizes mitotic spindle assembly protein MAD1 mRNA (5). Finally, *CNOT3* appears to act as a modifier gene affecting the penetrance of mutations causing autosomal dominant retinitis pigmentosa (6) and as a tumor suppressor associated with cases of adult T-cell acute lymphoblastic leukemia (7).

Background References

1. Denis, C.L. and Chen, J. (2003) *Prog Nucleic Acid Res Mol Biol* 73, 221-50.
2. Lau, N.C. et al. (2009) *Biochem J* 422, 443-53.
3. Chen, C. et al. (2011) *Biochem Biophys Res Commun* 411, 360-4.
4. Zheng, X. et al. (2012) *Stem Cells* 30, 910-22.
5. Takahashi, A. et al. (2012) *Biochem Biophys Res Commun* 419, 268-73.
6. Venturini, G. et al. (2012) *PLoS Genet* 8, e1003040.
7. De Keersmaecker, K. et al. (2013) *Nat Genet* 45, 186-90.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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