

coilin (Pdelta): sc-56298



The Power to Question

BACKGROUND

Coilin is the primary protein of nuclear coiled (Cajal) bodies. Cajal bodies are small nuclear organelles and contain many proteins involved in RNA transcription and processing. Coilin is a self-associating protein with a nucleolar localization signal. It is essential for the proper formation of Cajal bodies and for the recruitment of snRNP and survival motor neuron (SMN) complex proteins to Cajal bodies. Coilin directly binds SMN proteins in the recruitment process and competes with Smb' for SMN interactions. In the developing organism, Cajal bodies play a role in the assembly of the nucleolus. While the N-terminus of coilin contains the self-associating domain, the C-terminus of coilin regulates the number of Cajal bodies present in the cell.

CHROMOSOMAL LOCATION

Genetic locus: COIL (human) mapping to 17q22.

SOURCE

coilin (Pdelta) is a mouse monoclonal antibody raised against the C-terminus of coilin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

coilin (Pdelta) is available conjugated to agarose (sc-56298 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56298 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56298 PE), fluorescein (sc-56298 FITC), Alexa Fluor® 488 (sc-56298 AF488), Alexa Fluor® 546 (sc-56298 AF546), Alexa Fluor® 594 (sc-56298 AF594) or Alexa Fluor® 647 (sc-56298 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56298 AF680) or Alexa Fluor® 790 (sc-56298 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

coilin (Pdelta) is recommended for detection of coilin of 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 immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for coilin siRNA (h): sc-37570, coilin shRNA Plasmid (h): sc-37570-SH and coilin shRNA (h) Lentiviral Particles: sc-37570-V.

Molecular Weight of coilin: 80 kDa.

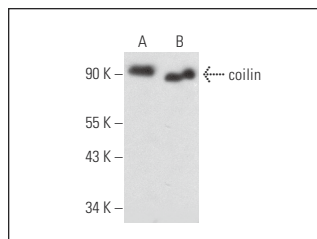
Positive Controls: K-562 nuclear extract: sc-2130, BJAB whole cell lysate: sc-2207 or Jurkat nuclear extract: sc-2132.

STORAGE

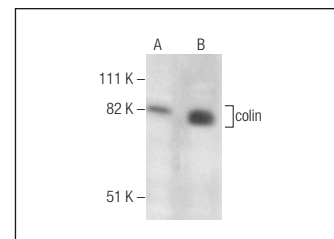
Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

DATA

coilin (Pdelta): sc-56298. Western blot analysis of coilin expression in COLO 320DM (A) and BJAB (B) whole cell lysates.



coilin (Pdelta): sc-56298. Western blot analysis of coilin expression in Jurkat (A) and K-562 (B) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Ghule, P.N., et al. 2008. Staged assembly of histone gene expression machinery at subnuclear foci in the abbreviated cell cycle of human embryonic stem cells. *Proc. Natl. Acad. Sci. USA* 105: 16964-16969.
2. Ghule, P.N., et al. 2009. The subnuclear organization of histone gene regulatory proteins and 3' end processing factors of normal somatic and embryonic stem cells is compromised in selected human cancer cell types. *J. Cell. Physiol.* 220: 129-135.
3. Shaiken, T.E. and Opekun, A.R. 2014. Dissecting the cell to nucleus, perinucleus and cytosol. *Sci. Rep.* 4: 4923.
4. Cantarero, L., et al. 2015. VRK1 regulates Cajal body dynamics and protects coilin from proteasomal degradation in cell cycle. *Sci. Rep.* 5: 10543.
5. Rassoolzadeh, H., et al. 2016. Overexpression of the scaffold WD40 protein WRAP53β enhances the repair of and cell survival from DNA double-strand breaks. *Cell Death Dis.* 7: e2267.
6. Dobson, J.R., et al. 2017. Identifying nuclear matrix-attached DNA across the genome. *J. Cell. Physiol.* 232: 1295-1305.
7. El-Bazzal, L., et al. 2019. Loss of Cajal bodies in motor neurons from patients with novel mutations in VRK1. *Hum. Mol. Genet.* 28: 2378-2394.
8. Imada, T., et al. 2021. RNA polymerase II condensate formation and association with Cajal and histone locus bodies in living human cells. *Genes Cells* 26: 298-312.
9. Lee, J., et al. 2021. Formation of non-nucleoplasmic proteasome foci during the late stage of hyperosmotic stress. *Cells* 10: 2493.
10. Quinodoz, S.A., et al. 2021. RNA promotes the formation of spatial compartments in the nucleus. *Cell* 184: 5775-5790.e30.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.