

coilin (F-7): sc-55594



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; Coil (mouse) mapping to 11 C.

SOURCE

coilin (F-7) is a mouse monoclonal antibody raised against amino acids 277-576 mapping at the C-terminus of coilin of human origin.

PRODUCT

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

coilin (F-7) is available conjugated to agarose (sc-55594 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55594 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55594 PE), fluorescein (sc-55594 FITC), Alexa Fluor® 488 (sc-55594 AF488), Alexa Fluor® 546 (sc-55594 AF546), Alexa Fluor® 594 (sc-55594 AF594) or Alexa Fluor® 647 (sc-55594 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55594 AF680) or Alexa Fluor® 790 (sc-55594 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

coilin (F-7) is recommended for detection of coilin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

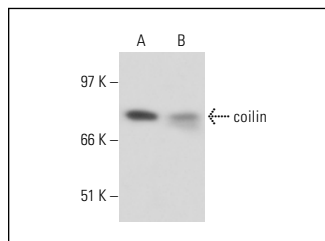
Suitable for use as control antibody for coilin siRNA (h): sc-37570, coilin siRNA (m): sc-37571, coilin shRNA Plasmid (h): sc-37570-SH, coilin shRNA Plasmid (m): sc-37571-SH, coilin shRNA (h) Lentiviral Particles: sc-37570-V and coilin shRNA (m) Lentiviral Particles: sc-37571-V.

Molecular Weight of coilin: 80 kDa.

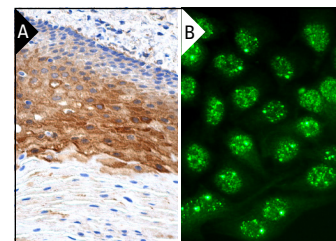
Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat nuclear extract: sc-2132 or MOLT-4 nuclear extract: sc-2151.

STORAGE

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

DATA

coilin (F-7): sc-55594. Western blot analysis of coilin expression in MOLT-4 (A) and Jurkat (B) nuclear extracts.



coilin (F-7): sc-55594. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing nuclear and cytoplasmic staining of squamous epithelial cells (A). Immunofluorescence staining of formalin-fixed HeLa cells showing cajal body localization (B).

SELECT PRODUCT CITATIONS

- Xiao, R., et al. 2012. Nuclear matrix factor hnRNP U/SAF-A exerts a global control of alternative splicing by regulating U2 snRNP maturation. *Mol. Cell* 45: 656-668.
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- Husedzinovic, A., et al. 2015. The catalytically inactive tyrosine phosphatase HD-PTP/PTPN23 is a novel regulator of SMN complex localization. *Mol. Biol. Cell* 26: 161-171.
- Ji, M.H., et al. 2016. Physiological expression and accumulation of the products of two upstream open reading frames mrt1 and MycHex1 along with p64 and p67 Myc from the human c-Myc locus. *J. Cell. Biochem.* 117: 1407-1418.
- Chen, Z., et al. 2017. Identification of a 35S U4/U6.U5 tri-small nuclear ribonucleoprotein (tri-snRNP) complex intermediate in spliceosome assembly. *J. Biol. Chem.* 292: 18113-18128.
- Karpova, Y., et al. 2019. Non-NAD-like PARP-1 inhibitors in prostate cancer treatment. *Biochem. Pharmacol.* 167: 149-162.
- Hirai, Y., et al. 2020. Differential roles of two DDX17 isoforms in the formation of membraneless organelles. *J. Biochem.* 168: 33-40.
- Quinodoz, S.A., et al. 2021. RNA promotes the formation of spatial compartments in the nucleus. *Cell* 184: 5775-5790.e30.
- Pérez-Berlanga, M., et al. 2023. Loss of TDP-43 oligomerization or RNA binding elicits distinct aggregation patterns. *EMBO J.* 42: e111719.

RESEARCH USE

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