

Med31 (3-9D): sc-101189

BACKGROUND

Med31 (mediator of RNA polymerase II transcription subunit 31), also known as Soh1 or CGI-125, is a 131 amino acid protein that belongs to the mediator complex subunit 31 family. Mediator proteins serve as connectors between transcriptional activators and basal transcription machinery. Med31 is an evolutionary conserved coregulator of RNA polymerase II transcription and is a stable component of the Mediator complex. It is involved in forming a scaffold with other regulatory proteins for the assembly of a functional preinitiation complex with RNA polymerase II and general transcription factors. Med31 is required for normal levels of gene conversion during meiosis and contributes in the coordination of cellular processes by regulating the expression of larger sets of genes.

REFERENCES

- Linder, T. and Gustafsson, C.M. 2004. The Soh1/Med31 protein is an ancient component of *Schizosaccharomyces pombe* and *Saccharomyces cerevisiae* mediator. *J. Biol. Chem.* 279: 49455-49459.
- Guglielmi, B., et al. 2004. A high resolution protein interaction map of the yeast mediator complex. *Nucleic Acids Res.* 32: 5379-5391.
- van de Peppel, J., et al. 2005. Mediator expression profiling epistasis reveals a signal transduction pathway with antagonistic submodules and highly specific downstream targets. *Mol. Cell* 19: 511-522.
- Guglielmi, B., et al. 2007. TFIIIS elongation factor and mediator act in conjunction during transcription initiation *in vivo*. *Proc. Natl. Acad. Sci. USA* 104: 16062-16067.
- Jordan, P.W., et al. 2007. Novel roles for selected genes in meiotic DNA processing. *PLoS Genet.* 3: e222.
- Miklos, I., et al. 2008. Genomic expression patterns in cell separation mutants of *Schizosaccharomyces pombe* defective in the genes *sep10+* and *sep15+* coding for the mediator subunits Med31 and Med8. *Mol. Genet. Genomics* 279: 225-238.
- Bosveld, F., et al. 2008. Establishment of cell fate during early *Drosophila* embryogenesis requires transcriptional mediator subunit dMed31. *Dev. Biol.* 313: 802-813.

CHROMOSOMAL LOCATION

Genetic locus: MED31 (human) mapping to 17p13.1.

SOURCE

Med31 (3-9D) is a mouse monoclonal antibody raised against recombinant Med31 of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2b} kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Med31 (3-9D) is recommended for detection of Med31 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)], 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 Med31 siRNA (h): sc-93999, Med31 shRNA Plasmid (h): sc-93999-SH and Med31 shRNA (h) Lentiviral Particles: sc-93999-V.

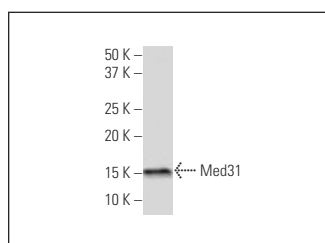
Molecular Weight of Med31: 16 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

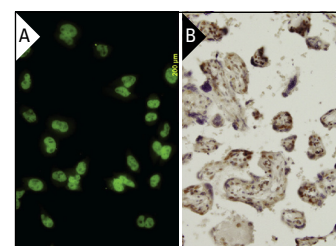
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Med31 (3-9D): sc-101189. Western blot analysis of Med31 expression in MCF7 whole cell lysate.



Med31 (3-9D): sc-101189. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Beadle, E.P., et al. 2018. Med31 involved in regulating self-renewal and adipogenesis of human mesenchymal stem cells. *Mol. Biol. Rep.* 45: 1545-1550.
- Jaeger, M.G., et al. 2020. Selective Mediator dependence of cell-type-specifying transcription. *Nat. Genet.* 52: 719-727.

RESEARCH USE

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