

INTS4 (G-13): sc-168194

BACKGROUND

RNA polymerase II (Pol II) is an enzyme that is composed of twelve subunits and is responsible for the transcription of protein-coding genes. Transcription initiation requires Pol II-mediated recruitment of transcription machinery to a target promoter, thereby allowing transcription to begin. The integrator complex is a multi-protein complex that associates with the C-terminal domain of Pol II and is involved in small nuclear RNA (snRNA) transcription and 3'-end processing. INTS4 (integrator complex subunit 4) is a 963 amino acid protein that contains eight HEAT repeats and is a component of the integrator complex. Localized to the nucleus, INTS4 plays a role in the processing of select snRNAs and mediates snRNA transcriptional regulation events. Four isoforms of INTS4 are expressed due to alternative splicing events.

REFERENCES

1. Aasland, R., Gibson, T.J. and Stewart, A.F. 1995. The PHD finger: implications for chromatin-mediated transcriptional regulation. *Trends Biochem. Sci.* 20: 56-59.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611348. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Uguen, P. and Murphy, S. 2003. The 3'-ends of human pre-snRNAs are produced by RNA polymerase II CTD-dependent RNA processing. *EMBO J.* 22: 4544-4554.
4. Jacobs, E.Y., Ogiwara, I. and Weiner, A.M. 2004. Role of the C-terminal domain of RNA polymerase II in U2 snRNA transcription and 3' processing. *Mol. Cell. Biol.* 24: 846-855.
5. Meinhart, A. and Cramer, P. 2004. Recognition of RNA polymerase II carboxy-terminal domain by 3'-RNA-processing factors. *Nature* 430: 223-226.
6. Baillat, D., Hakimi, M.A., Näär, A.M., Shilatifard, A., Cooch, N. and Shiekhattar, R. 2005. Integrator, a multiprotein mediator of small nuclear RNA processing, associates with the C-terminal repeat of RNA polymerase II. *Cell* 123: 265-276.
7. Egloff, S., O'Reilly, D. and Murphy, S. 2008. Expression of human snRNA genes from beginning to end. *Biochem. Soc. Trans.* 36: 590-594.

CHROMOSOMAL LOCATION

Genetic locus: INTS4 (human) mapping to 11q14.1; Ints4 (mouse) mapping to 7 E1.

SOURCE

INTS4 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of INTS4 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-168194 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

INTS4 (G-13) is recommended for detection of INTS4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other INTS family members.

INTS4 (G-13) is also recommended for detection of INTS4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for INTS4 siRNA (h): sc-96598, INTS4 siRNA (m): sc-146254, INTS4 shRNA Plasmid (h): sc-96598-SH, INTS4 shRNA Plasmid (m): sc-146254-SH, INTS4 shRNA (h) Lentiviral Particles: sc-96598-V and INTS4 shRNA (m) Lentiviral Particles: sc-146254-V.

Molecular Weight of INTS4: 108 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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