

SnoA (C-20): sc-9597

BACKGROUND

The Ski family of oncogenes includes Ski and Sno (Ski-related novel gene, or Ski-like). Three isoforms of human Sno (SnoN, SnoA and SnoI) and two isoforms in mouse (SnoN and SnoN2, also designated sno-dE3) are produced by alternative splicing of the SKIL gene. Ski family members are nuclear proteins that form homodimers and heterodimers, bind to DNA and function as transcriptional activators and repressors. These proteins consist of five tandem repeats in the C-terminal domain and two leucine zipper motifs that are responsible for efficient DNA binding, trimerization and cellular transformation. The Ski proteins regulate TGF β induced gene-specific transcriptional activation by effectively repressing Smad activity and, thereby, inhibit TGF β induced cell growth and extracellular matrix production. The amino-terminus of Ski and SnoN preferentially associates with the MH2 domain of Smad2 and Smad4 of the Smad family of transcription factors, where they then recruit the transcriptional corepressor protein N-CoR to the complex to inhibit transcription. Alternatively, Ski proteins are negatively regulated by various Smad proteins, as TGF β induces Smad3 accumulation in the nucleus, where it is then responsible for inducing the rapid degradation of SnoN and facilitating TGF β signaling pathways and Smad-activated gene transcription.

REFERENCES

- Nomura, N., Sasamoto, S., Ishii, S., Date, T., Matsui, M. and Ishizaki, R. 1989. Isolation of human cDNA clones of Ski and the Ski-related gene, Sno. *Nucleic Acids Res.* 17: 5489-5500.
- Pearson-White, S. 1993. SnoI, a novel alternatively spliced isoform of the Ski proto-oncogene homolog, Sno. *Nucleic Acids Res.* 21: 4632-4638.
- Nagase, T., Nomura, N. and Ishii, S. 1993. Complex formation between proteins encoded by the Ski gene family. *J. Biol. Chem.* 268: 13710-13716.
- Heyman, H.C. and Stavnezer, E. 1994. A carboxyl-terminal region of the Ski oncoprotein mediates homodimerization as well as heterodimerization with the related protein SnoN. *J. Biol. Chem.* 269: 26996-27003.
- Mimura, N., Ichikawa, K., Asano, A., Nagase, T. and Ishii, S. 1996. A transient increase of SnoN transcript by growth arrest upon serum deprivation and cell-to-cell contact. *FEBS Lett.* 397: 253-259.
- Vogel, G. 1999. A new blocker for the TGF β pathway. *Science* 286: 665.
- Stroschein, S.L., Wang, W., Zhou, S., Zhou, Q. and Luo, K. 1999. Negative feedback regulation of TGF β signaling by the SnoN oncoprotein. *Science* 286: 771-774.
- Vázquez-Macías, A., Ruíz-Mendoza, A.B., Fonseca-Sánchez, M.A., Briones-Orta, M.A. and Macías-Silva, M. 2005. Downregulation of Ski and SnoN corepressors by Anisomycin. *FEBS Lett.* 579: 3701-3706.
- Reed, J.A., Lin, Q., Chen, D., Mian, I.S. and Medrano, E.E. 2005. Ski pathways inducing progression of human melanoma. *Cancer Metastasis Rev.* 24: 265-272.

CHROMOSOMAL LOCATION

Genetic locus: SKIL (human) mapping to 3q26.2; Skil (mouse) mapping to 3 A3.

SOURCE

SnoA (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SnoA of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9597 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9597 X, 200 μ g/0.1 ml.

APPLICATIONS

SnoA (C-20) is recommended for detection of SnoA of 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).

Suitable for use as control antibody for SnoA/N siRNA (h): sc-36518, SnoA/N shRNA Plasmid (h): sc-36518-SH and SnoA/N shRNA (h) Lentiviral Particles: sc-36518-V.

SnoA (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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.