

SnoN (m): 293T Lysate: sc-123684

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

1. Nomura, N., et al. 1989. Isolation of human cDNA clones of Ski and the Ski-related gene, Sno. *Nucleic Acids Res.* 17: 5489-5500.
2. Pearson-White, S. 1993. SnoI, a novel alternatively spliced isoform of the Ski proto-oncogene homolog, Sno. *Nucleic Acids Res.* 21: 4632-4638.
3. Nagase, T., et al. 1993. Complex formation between proteins encoded by the Ski gene family. *J. Biol. Chem.* 268: 13710-13716.
4. 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.
5. Mimura, N., et al. 1996. A transient increase of SnoN transcript by growth arrest upon serum deprivation and cell-to-cell contact. *FEBS Lett.* 397: 253-259.
6. Vogel, G. 1999. A new blocker for the TGF β pathway. *Science* 286: 665.
7. Stroschein, S.L., et al. 1999. Negative feedback regulation of TGF β signaling by the SnoN oncoprotein. *Science* 286: 771-774.
8. Vazquez-Macias, A., et al. 2005. Downregulation of Ski and SnoN corepressors by anisomycin. *FEBS Lett.* 579: 3701-3706.
9. Reed, J.A., et al. 2005. Ski pathways inducing progression of human melanoma. *Cancer Metastasis Rev.* 24: 265-272.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Skil (mouse) mapping to 3 A3.

PRODUCT

SnoN (m): 293T Lysate represents a lysate of mouse SnoN transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

SnoN (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive SnoN antibodies. Recommended use: 10-20 μ l per lane.

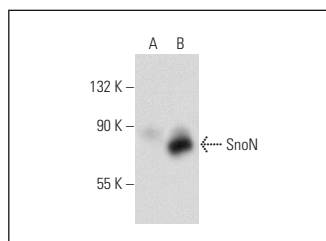
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SnoN (B-3): sc-136958 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse SnoN expression in SnoN transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

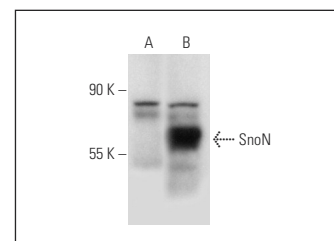
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



SnoN (B-3): sc-136958. Western blot analysis of SnoN expression in non-transfected: sc-117752 (A) and mouse SnoN transfected: sc-123684 (B) 293T whole cell lysates.



SnoN (C6): sc-133119. Western blot analysis of SnoN expression in non-transfected: sc-117752 (A) and mouse SnoN transfected: sc-123684 (B) 293T whole cell lysates.

RESEARCH USE

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