

Ski (A-20): sc-9590

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.

CHROMOSOMAL LOCATION

Genetic locus: SKI (human) mapping to 1p36.33.

SOURCE

Ski (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Ski 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9590 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-9590 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ski (A-20) is recommended for detection of Ski of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

Ski (A-20) is also recommended for detection of Ski in additional species, including equine, canine, bovine and avian.

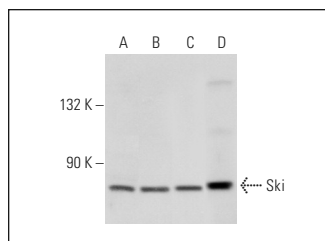
Suitable for use as control antibody for Ski siRNA (h): sc-38366, Ski shRNA Plasmid (h): sc-38366-SH and Ski shRNA (h) Lentiviral Particles: sc-38366-V.

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

Molecular Weight of Ski: 95-115 kDa.

Positive Controls: A549 cell lysate: sc-2413, HL-60 whole cell lysate: sc-2209 or U-937 cell lysate: sc-2239.

DATA



Ski (A-20): sc-9590. Western blot analysis of Ski expression in A549 (A), HL-60 (B) and U-937 (C) whole cell lysates and K-562 nuclear extract (D).

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.



Try **Ski (G8): sc-33693** or **Ski (6D763): sc-73034**, our highly recommended monoclonal alternatives to Ski (A-20).