

Ski (G8): sc-33693

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 SnoL) 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. SnoL, a novel alternatively spliced isoform of the Ski protooncogene homolog, Sno. *Nucleic Acids Res.* 21: 4632-4638.

CHROMOSOMAL LOCATION

Genetic locus: SKI (human) mapping to 1p36.33; Ski (mouse) mapping to 4 E2.

SOURCE

Ski (G8) is a mouse monoclonal antibody raised against recombinant v-Ski.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain 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-33693 X, 200 μ g/0.1 ml.

Ski (G8) is available conjugated to agarose (sc-33693 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33693 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33693 PE), fluorescein (sc-33693 FITC), Alexa Fluor[®] 488 (sc-33693 AF488), Alexa Fluor[®] 546 (sc-33693 AF546), Alexa Fluor[®] 594 (sc-33693 AF594) or Alexa Fluor[®] 647 (sc-33693 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-33693 AF680) or Alexa Fluor[®] 790 (sc-33693 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Ski (G8) is recommended for detection of Ski of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

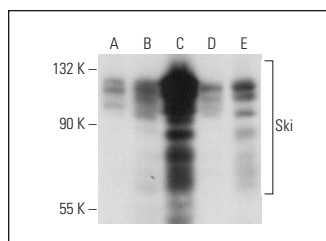
Suitable for use as control antibody for Ski siRNA (h): sc-38366, Ski siRNA (m): sc-38367, Ski shRNA Plasmid (h): sc-38366-SH, Ski shRNA Plasmid (m): sc-38367-SH, Ski shRNA (h) Lentiviral Particles: sc-38366-V and Ski shRNA (m) Lentiviral Particles: sc-38367-V.

Ski (G8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

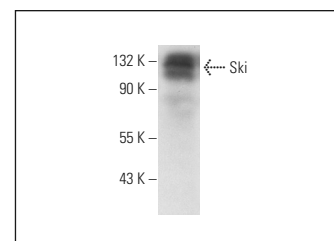
Molecular Weight of Ski: 95-115 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, JAR cell lysate: sc-2276 or PC-3 cell lysate: sc-2220.

DATA



Ski (G8): sc-33693. Western blot analysis of Ski expression in Sol8 (A), JAR (B), LADMAC (C), PC-3 (D) and THP-1 (E) whole cell lysates.



Ski (G8): sc-33693. Western blot analysis of Ski expression in Sol8 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Liu, X., et al. 2008. The essential role for c-Ski in mediating TGF- β 1-induced bi-directional effects on skin fibroblast proliferation through a feedback loop. *Biochem. J.* 409: 289-297.
2. Inoue, Y., et al. 2011. Suppression of p53 activity through the cooperative action of Ski and histone deacetylase SIRT1. *J. Biol. Chem.* 286: 6311-6320.
3. Hneino, M., et al. 2012. The TGF- β /Smad repressor TG-interacting factor 1 (TGIF1) plays a role in radiation-induced intestinal injury independently of a Smad signaling pathway. *PLoS ONE* 7: e35672.
4. Li, J., et al. 2013. c-Ski inhibits the proliferation of vascular smooth muscle cells via suppressing Smad3 signaling but stimulating p38 pathway. *Cell. Signal.* 25: 159-167.
5. Li, J., et al. 2014. MiR-21 inhibits c-Ski signaling to promote the proliferation of rat vascular smooth muscle cells. *Cell. Signal.* 26: 724-729.

RESEARCH USE

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