SANTA CRUZ BIOTECHNOLOGY, INC.

Ski (H-329): sc-9140

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 TGFβ induced gene-specific transcriptional activation by effectively repressing Smad activity and, thereby, inhibit TGFβ 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 TGFβ induces Smad3 accumulation in the nucleus, where it is then responsible for inducing the rapid degradation of SnoN and faciliating TGFβ signaling pathways and Smad-activated gene transcription.

CHROMOSOMAL LOCATION

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

SOURCE

Ski (H-329) is a rabbit polyclonal antibody raised against amino acids 400-728 of Ski 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9140 X, 200 µg/0.1 ml.

APPLICATIONS

Ski (H-329) is recommended for detection of Ski of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (H-329) is also recommended for detection of Ski in additional species, including equine, canine and bovine.

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.

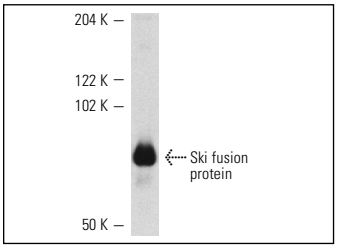
Ski (H-329) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Ski: 95-115 kDa.

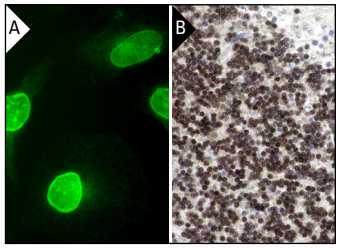
STORAGE

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

DATA



Ski (H-329): sc-9140. Western blot analysis of human recombinant Ski fusion protein.



Ski (H-329): sc-9140. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing nuclear staining of cells in molecular layer and Purkinje cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Macias-Silva, M., et al. 2002. Up-regulated transcriptional repressors SnoN and Ski bind Smad proteins to antagonize transforming growth factor-β signals during liver regeneration. J. Biol. Chem. 277: 28483-28490.
2. Zhao, H.L., et al. 2009. The Ski protein can inhibit ligand induced RARα and HDAC3 degradation in the retinoic acid signaling pathway. Biochem. Biophys. Res. Commun. 383: 119-124.
3. Zhao, H.L., et al. 2010. The Ski protein negatively regulates Siah2-mediated HDAC3 degradation. Biochem. Biophys. Res. Commun. 399: 623-628.
4. Li, P., et al. 2011. Ski, a modulator of wound healing and scar formation in the rat skin and rabbit ear. J. Pathol. 223: 659-671.
5. Javelaud, D., et al. 2011. Efficient TGF-β/SMAD signaling in human melanoma cells associated with high c-SKI/SnoN expression. Mol. Cancer 10: 2.
6. 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.
7. Lanshakov, D., et al. 2012. Protooncogene Ski cooperates with the chromatin-remodeling factor Satb2 in specifying callosal neurons. Proc. Natl. Acad. Sci. USA 109: 3546-3551.

RESEARCH USE

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