

SNAI 1 (G-7): sc-271977



The Power to Question

BACKGROUND

The Snail family of developmental regulatory proteins is a group of widely conserved zinc-finger proteins that regulate transcription and include the mammalian proteins SLUG; SNAI 1, the human homolog of *Drosophila* SNAIL; and Smuc. SNAI 1 and SLUG are expressed in placenta and adult heart, liver and skeletal muscle. SNAI 1 and the corresponding mouse homolog, Sna, each contain three classic zinc fingers and one atypical zinc finger, while SLUG contains five zinc finger regions and a transcriptional repression domain at the amino-terminus, which enables SLUG to act as a negative regulator of gene expression. SLUG is implicated in the generation and migration of neural crest cells in human embryos and also contributes to limb bud development. In addition, SLUG also constitutes a cellular anti-apoptotic transcription factor that effectively prevents apoptosis in murine pro-B cells deprived of IL-3. The SNAIL-related gene from murine skeletal muscle cells, Smuc, is highly expressed in skeletal muscle and thymus and can, likewise, repress gene transcription. Smuc preferentially associates with CAGGTG and CACCTG E-box motifs (CANNTG) on DNA and involves the five putative DNA-binding zinc finger domains at the C-terminal region of Smuc.

CHROMOSOMAL LOCATION

Genetic locus: SNAI1 (human) mapping to 20q13.13; Snai1 (mouse) mapping to 2 H3.

SOURCE

SNAI 1 (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 113-139 within an internal region of SNAI 1 of human origin.

PRODUCT

Each vial contains 200 µg 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-271977 X, 200 µg/0.1 ml.

SNAI 1 (G-7) is available conjugated to agarose (sc-271977 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271977 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271977 PE), fluorescein (sc-271977 FITC), Alexa Fluor® 488 (sc-271977 AF488), Alexa Fluor® 546 (sc-271977 AF546), Alexa Fluor® 594 (sc-271977 AF594) or Alexa Fluor® 647 (sc-271977 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271977 AF680) or Alexa Fluor® 790 (sc-271977 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271977 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

SNAI 1 (G-7) is recommended for detection of SNAI 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

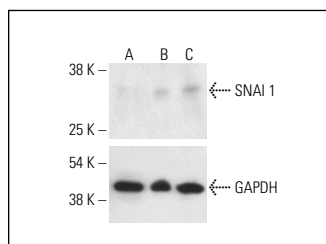
Suitable for use as control antibody for SNAI 1 siRNA (h): sc-38398, SNAI 1 siRNA (m): sc-38399, SNAI 1 shRNA Plasmid (h): sc-38398-SH, SNAI 1 shRNA Plasmid (m): sc-38399-SH, SNAI 1 shRNA (h) Lentiviral Particles: sc-38398-V and SNAI 1 shRNA (m) Lentiviral Particles: sc-38399-V.

SNAI 1 (G-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

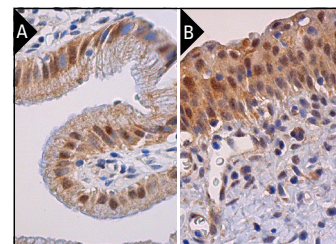
Molecular Weight of SNAI 1: 29 kDa.

Positive Controls: chemically-treated A-431 whole cell lysate or Caki-1 cell lysate: sc-2224.

DATA



SNAI 1 (G-7): sc-271977. Western blot analysis of SNAI 1 expression in untreated (A) and chemically-treated (B, C) A-431 whole cell lysates. GAPDH (0411): sc-47724 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



SNAI 1 (G-7): sc-271977. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear and cytoplasmic staining of urothelial cells (B).

SELECT PRODUCT CITATIONS

- Wang, H., et al. 2013. Resveratrol inhibits TGF-β1-induced epithelial-to-mesenchymal transition and suppresses lung cancer invasion and metastasis. *Toxicology* 303: 139-146.
- Zou, X., et al. 2023. GATA zinc finger protein p66β promotes breast cancer cell migration by acting as a co-activator of Snail. *Cell Death Dis.* 14: 382.
- Li, M., et al. 2024. Energy stress-activated AMPK phosphorylates Snail1 and suppresses its stability and oncogenic function. *Cancer Lett.* 595: 216987.

RESEARCH USE

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

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