

Smuc (D-14): sc-324318

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, SNAI1, the human homolog of *Drosophila* SNAIL, and Smuc. SNAI1 and SLUG are expressed in placenta and adult heart, liver, and skeletal muscle. SNAI1, and the corresponding mouse homolog Sna, contains 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.

REFERENCES

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3. Jiang, R., et al. 1998. Genomic organization, expression and chromosomal localization of the mouse Slug (Slugh) gene. *Biochim. Biophys. Acta* 1443: 251-254.
4. Paznekas, W.A., et al. 1999. Genomic organization, expression, and chromosome location of the human SNAIL gene (SNAI1) and a related processed pseudogene (SNAI1P). *Genomics* 62: 42-49.
5. Twigg, S.R., et al. 1999. Characterisation of the human snail (SNAI1) gene and exclusion as a major disease gene in craniosynostosis. *Hum. Genet.* 105: 320-326.
6. Inukai, T., et al. 1999. SLUG, a ces-1-related zinc finger transcription factor gene with antiapoptotic activity, is a downstream target of the E2A-HLF oncoprotein. *Mol. Cell* 4: 343-352.
7. Stegmann, K., et al. 1999. Human transcription factor SLUG: mutation analysis in patients with neural tube defects and identification of a missense mutation (D119E) in the Slug subfamily-defining region. *Mutat. Res.* 406: 63-69.
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CHROMOSOMAL LOCATION

Genetic locus: SNAI3 (human) mapping to 16q24.3.

RESEARCH USE

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

SOURCE

Smuc (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Smuc 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.

Blocking peptide available for competition studies, sc-324318 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Smuc (D-14) is recommended for detection of Smuc of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for Smuc siRNA (h): sc-93291, Smuc shRNA Plasmid (h): sc-93291-SH and Smuc shRNA (h) Lentiviral Particles: sc-93291-V.

Molecular Weight of Smuc: 36 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.