

Smuc (E-3): sc-390438

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

1. Nieto, M.A., et al. 1992. Cloning and developmental expression of Sna, a murine homologue of the *Drosophila* snail gene. *Development* 116: 227-237.
2. Cohen, M.E., et al. 1998. Human SLUG gene organization, expression, and chromosome map location on 8q. *Genomics* 51: 468-471.
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 SNAI1 gene (SNAI1) and a related processed pseudogene (SNAI1P). *Genomics* 62: 42-49.

CHROMOSOMAL LOCATION

Genetic locus: SNAI3 (human) mapping to 16q24.3; Snai3 (mouse) mapping to 8 E1.

SOURCE

Smuc (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 25-63 near the N-terminus of Smuc of mouse origin.

PRODUCT

Each vial contains 200 µg IgM 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-390438 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-390438 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.

APPLICATIONS

Smuc (E-3) is recommended for detection of Smuc 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) 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 siRNA (m): sc-38395, Smuc shRNA Plasmid (h): sc-93291-SH, Smuc shRNA Plasmid (m): sc-38395-SH, Smuc shRNA (h) Lentiviral Particles: sc-93291-V and Smuc shRNA (m) Lentiviral Particles: sc-38395-V.

Smuc (E-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

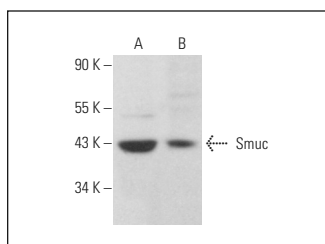
Molecular Weight of Smuc: 36 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, RAW 264.7 whole cell lysate: sc-2211 or Sol8 cell lysate: sc-2249.

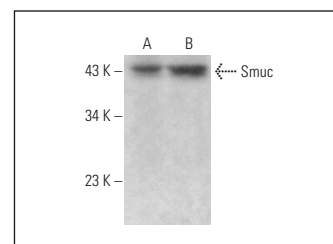
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Smuc (E-3): sc-390438. Western blot analysis of Smuc expression in Sol8 (A) and RAW 264.7 (B) whole cell lysates.



Smuc (E-3): sc-390438. Western blot analysis of Smuc expression in A-431 (A) and HL-60 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lee, J.E., et al. 2021. Olig2 regulates p53-mediated apoptosis, migration and invasion of melanoma cells. *Sci. Rep.* 11: 7778.

RESEARCH USE

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