

SLUG (h2): 293 Lysate: sc-111905

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 in 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. SLUG contains five zinc finger regions and a transcriptional repression domain at the amino-terminus, enabling 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 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 mis-sense mutation (D119E) in the SLUG subfamily-defining region. *Mutat. Res.* 406: 63-69.
8. Kataoka, H., et al. 2000. A novel SNAIL-related transcription factor Smuc regulates basic helix-loop-helix transcription factor activities via specific E-box motifs. *Nucleic Acids Res.* 28: 626-633.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: SNAI2 (human) mapping to 8q11.21.

PRODUCT

SLUG (h2): 293 Lysate represents a lysate of human SLUG transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

SLUG (h2): 293 Lysate is suitable as a Western Blotting positive control for human reactive SLUG antibodies. Recommended use: 10-20 µl per lane.

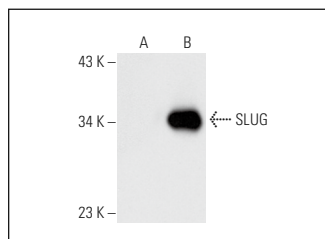
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

SLUG (A-7): sc-166476 is recommended as a positive control antibody for Western Blot analysis of enhanced human SLUG expression in SLUG transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

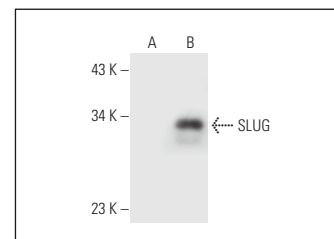
RECOMMENDED SUPPORT REAGENTS

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.

DATA



SLUG (A-7): sc-166476. Western blot analysis of SLUG expression in non-transfected: sc-110760 (A) and human SLUG transfected: sc-111905 (B) 293 whole cell lysates.



SLUG (C-7): sc-166902. Western blot analysis of SLUG expression in non-transfected: sc-110760 (A) and human SLUG transfected: sc-111905 (B) 293 whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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