

SLUG (A-7): sc-166476

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 Snai, 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.

REFERENCES

1. Nieto, M.A., et al. 1992. Cloning and developmental expression of Snai, 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.

CHROMOSOMAL LOCATION

Genetic locus: SNAI2 (human) mapping to 8q11.21; Snai2 (mouse) mapping to 16 A1.

SOURCE

SLUG (A-7) is a mouse monoclonal antibody raised against amino acids 21-160 of SLUG 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-166476 X, 200 µg/0.1 ml.

SLUG (A-7) is available conjugated to agarose (sc-166476 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166476 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166476 PE), fluorescein (sc-166476 FITC), Alexa Fluor® 488 (sc-166476 AF488), Alexa Fluor® 546 (sc-166476 AF546), Alexa Fluor® 594 (sc-166476 AF594) or Alexa Fluor® 647 (sc-166476 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166476 AF680) or Alexa Fluor® 790 (sc-166476 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

SLUG (A-7) is recommended for detection of SLUG 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).

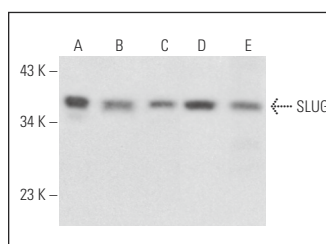
Suitable for use as control antibody for SLUG siRNA (h): sc-38393, SLUG siRNA (m): sc-38394, SLUG shRNA Plasmid (h): sc-38393-SH, SLUG shRNA Plasmid (m): sc-38394-SH, SLUG shRNA (h) Lentiviral Particles: sc-38393-V and SLUG shRNA (m) Lentiviral Particles: sc-38394-V.

SLUG (A-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

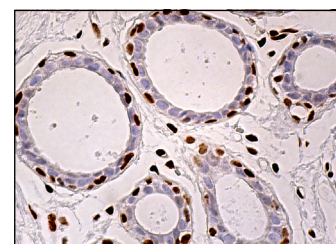
Molecular Weight of SLUG: 30 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, HeLa whole cell lysate: sc-2200 or MDA-MB-231 cell lysate: sc-2232.

DATA



SLUG (A-7): sc-166476. Western blot analysis of SLUG expression in HeLa (A), PC-3 (B), MDA-MB-231 (C) and Hep G2 (D) whole cell lysates and mouse placenta tissue extract (E).



SLUG (A-7): sc-166476. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Dey, P., et al. 2012. Estrogen receptors β 1 and β 2 have opposing roles in regulating proliferation and bone metastasis genes in the prostate cancer cell line PC3. *Mol. Endocrinol.* 26: 1991-2003.
2. Huang, J., et al. 2018. MicroRNA-124 acts as a tumor-suppressive miRNA by inhibiting the expression of Snail2 in osteosarcoma. *Oncol. Lett.* 15: 4979-4987.
3. Biamonte, F., et al. 2019. MicroRNA let-7g acts as tumor suppressor and predictive biomarker for chemoresistance in human epithelial ovarian cancer. *Sci. Rep.* 9: 5668.
4. Kim, Y., et al. 2020. α -Helical cell-penetrating peptide-mediated nasal delivery of resveratrol for inhibition of epithelial-to-mesenchymal transition. *J. Control. Release* 317: 181-194.

STORAGE

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