10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SLUG Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2053a

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	O43623
Other Accession	Q3MHQ4
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB01398
Calculated MW	29986
Antigen Region	98-129

Additional Information

Gene ID	6591
Other Names	Zinc finger protein SNAI2, Neural crest transcription factor Slug, Protein snail homolog 2, SNAI2, SLUG, SLUGH
Target/Specificity	This SLUG antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 98-129 amino acids from the Central region of human SLUG.
Dilution	WB~~1:2000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SLUG Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SNAI2
Synonyms	SLUG, SLUGH

Function	Transcriptional repressor that modulates both activator- dependent and basal transcription. Involved in the generation and migration of neural crest cells. Plays a role in mediating RAF1-induced transcriptional repression of the TJ protein, occludin (OCLN) and subsequent oncogenic transformation of epithelial cells (By similarity). Represses BRCA2 expression by binding to its E2-box- containing silencer and recruiting CTBP1 and HDAC1 in breast cells. In epidermal keratinocytes, binds to the E-box in ITGA3 promoter and represses its transcription. Involved in the regulation of ITGB1 and ITGB4 expression and cell adhesion and proliferation in epidermal keratinocytes. Binds to E-box2 domain of BSG and activates its expression during TGFB1-induced epithelial-mesenchymal transition (EMT) in hepatocytes. Represses E-Cadherin/CDH1 transcription via E-box elements. Involved in osteoblast maturation. Binds to RUNX2 and SOC9 promoters and may act as a positive and negative transcription regulator, respectively, in osteoblasts. Binds to CXCL12 promoter via E-box regions in mesenchymal stem cells and osteoblasts. Plays an essential role in TWIST1-induced EMT and its ability to promote invasion and metastasis.
Cellular Location	Nucleus. Cytoplasm. Note=Observed in discrete foci in interphase nuclei. These nuclear foci do not overlap with the nucleoli, the SP100 and the HP1 heterochromatin or the coiled body, suggesting SNAI2 is associated with active transcription or active splicing regions
Tissue Location	Expressed in most adult human tissues, including spleen, thymus, prostate, testis, ovary, small intestine, colon, heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Not detected in peripheral blood leukocyte. Expressed in the dermis and in all layers of the epidermis, with high levels of expression in the basal layers (at protein level). Expressed in osteoblasts (at protein level). Expressed in mesenchymal stem cells (at protein level) Expressed in breast tumor cells (at protein level)

Background

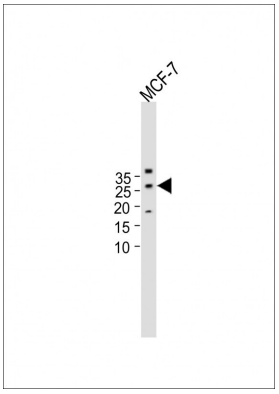
SLUG is a member of the Snail family of C2H2-type zinc finger transcription factors. The encoded protein acts as a transcriptional repressor that binds to E-box motifs and is also likely to repress E-cadherin transcription in breast carcinoma. This protein is involved in epithelial-mesenchymal transitions and has antiapoptotic activity. Mutations in this gene may be associated with sporadic cases of neural tube defects.

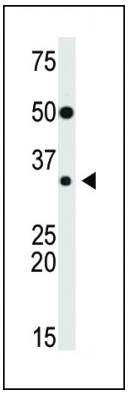
References

Sanchez-Martin, M., et al., Hum. Mol. Genet. 11(25):3231-3236 (2002). Hajra, K.M., et al., Cancer Res. 62(6):1613-1618 (2002). Hemavathy, K., et al., Mol. Cell. Biol. 20(14):5087-5095 (2000). Inukai, T., et al., Mol. Cell 4(3):343-352 (1999). Cohen, M.E., et al., Genomics 51(3):468-471 (1998).

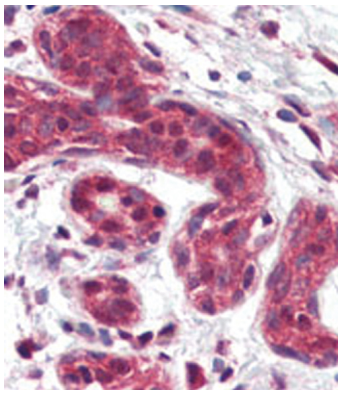
Images

All lanes : Anti-SLUG Antibody (Center) at 1:500 dilution
Lane 1 : MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 30kDa Blocking/Dilution buffer : 5% NFDM/TBST.

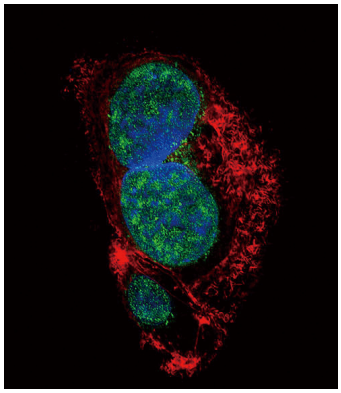




SLUG Antibody (Center) (Cat. #AP2053a) is used in Western blot to detect SLUG in mouse heart tissue lysate.



Formalin-fixed and paraffin-embedded human Breast tissue reacted with SLUG Antibody (Center)(Cat.#AP2053a), which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of SLUG Antibody (Center) (Cat#AP2053a) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).

Citations

- ERK Activation Modulates Cancer Stemness and Motility of a Novel Mouse Oral Squamous Cell Carcinoma Cell Line
- Hypoxia-induced Slug SUMOylation enhances lung cancer metastasis.
- Inhibiting interactions of lysine demethylase LSD1 with snail/slug blocks cancer cell invasion.
- Akt phosphorylates and activates HSF-1 independent of heat shock, leading to Slug overexpression and epithelial-mesenchymal transition (EMT) of HER2-overexpressing breast cancer cells.
- Biological roles and prognostic values of the epithelial-mesenchymal transition-mediating transcription factors Twist,

ZEB1 and Slug in diffuse large B-cell lymphoma.

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