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Slug Antibody

Catalog # ASC10468

Product Information

Application	WB, E
Primary Accession	O43623
Other Accession	O43623, 11134406
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	29986
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Slug antibody can be used for detection of Slug by Western blot at 1 to 2 g/mL.

Additional Information

Gene ID	6591
Other Names	Slug Antibody: SLUG, WS2D, SLUGH1, SNAIL2, SLUG, SLUGH, Zinc finger protein SNAI2, Neural crest transcription factor Slug, snail homolog 2 (Drosophila)
Target/Specificity	SNAI2;
Reconstitution & Storage	Slug antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Slug Antibody 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

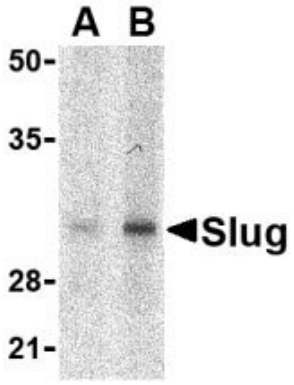
Slug Antibody: Slug, a member of the Snail family of C2H2-type zinc finger transcription factors, was initially identified to be involved in epithelial-mesenchymal transitions as well as the formation of the neural tube during vertebrate embryogenesis. Like Snail, Slug transcription can be induced by growth factors such as FGF, BMP, and TGF-beta. Once expressed, Slug will bind E-box regions of promoters and repress transcription of genes such as E-cadherin and Claudin-1. More recently, its expression in breast, esophogeal, and colorectal carcinomas has been correlated with poor prognosis for survival. Furthermore, Slug can protect hemapoietic progenitor cells from radiation-induced apoptosis by repressing the p53-mediated transcription of Puma, a BH3-only antagonist of the anti-apoptotic members of the Bcl-2 family. Slug antibody has no cross-reactivity to Snail protein.

References

Neito MA, Sargent MG, Wilkinson DG, et al. Control of cell behavior during vertebrate development by Slug, a zinc finger gene. Science 1994; 264:835-9.
Martinez-Estrada OM, Culleres A, Soriano FX, et al. The transcription factors Slug and Snail act as repressors of Claudin-1 expression in epithelial cells. Biochim J. 2006; 394:449-57.
Shioiri M, Shida T, Koda K, et al. Slug expression is an independent prognostic parameter for poor survival in colorectal carcinoma patients. Br. J. Cancer 2006; 94:1816-22.
Wu WS, Heinrichs S, Xu D, et al. Slug antagonizes p53-mediated apoptosis of hematopoietic progenitors by repressing puma. Cell 2005; 123:641-53.

Images

Western blot analysis of Slug in human kidney cell lysate with Slug antibody at in (A) 1 and (B) 2 µg/mL.



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