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SNAI1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2054d

Product Information

Application	WB, E
Primary Accession	O95863
Reactivity	Human
Predicted	Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB16686
Calculated MW	29083
Antigen Region	9-36

Additional Information

Gene ID	6615
Other Names	Zinc finger protein SNAI1, Protein snail homolog 1, Protein sna, SNAI1, SNAH
Target/Specificity	This SNAI1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 9-36 amino acids from the N-terminal region of human SNAI1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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	SNAI1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SNAI1
Synonyms	SNAH
Function	Involved in induction of the epithelial to mesenchymal transition (EMT), formation and maintenance of embryonic mesoderm, growth arrest, survival

	and cell migration (PubMed:10655587, PubMed:15647282, PubMed:20389281, PubMed:20562920, PubMed:21952048, PubMed:25827072). Binds to 3 E-boxes of the E-cadherin/CDH1 gene promoter and to the promoters of CLDN7 and KRT8 and, in association with histone demethylase KDM1A which it recruits to the promoters, causes a decrease in dimethylated H3K4 levels and represses transcription (PubMed:10655587, PubMed:20389281, PubMed:20562920). The N-terminal SNAG domain competes with histone H3 for the same binding site on the histone demethylase complex formed by KDM1A and RCOR1, and thereby inhibits demethylation of histone H3 at 'Lys-4' (in vitro) (PubMed:20389281, PubMed:21300290, PubMed:23721412). During EMT, involved with LOXL2 in negatively regulating pericentromeric heterochromatin transcription (PubMed:16096638). SNAI1 recruits LOXL2 to pericentromeric regions to oxidize histone H3 and repress transcription which leads to release of heterochromatin component CBX5/HP1A, enabling chromatin reorganization and acquisition of mesenchymal traits (By similarity). Associates with EGR1 and SP1 to mediate tetradecanoyl phorbol acetate (TPA)-induced up-regulation of CDKN2B, possibly by binding to the CDKN2B promoter region 5'-TCACA-3 (PubMed:20121949). In addition, may also activate the CDKN2B promoter by itself (PubMed:20121949).
Cellular Location	Nucleus. Cytoplasm. Note=Once phosphorylated (probably on Ser-107, Ser-111, Ser-115 and Ser-119) it is exported from the nucleus to the cytoplasm where subsequent phosphorylation of the destruction motif and ubiquitination involving BTRC occurs.
Tissue Location	Expressed in a variety of tissues with the highest expression in kidney. Expressed in mesenchymal and epithelial cell lines.

Background

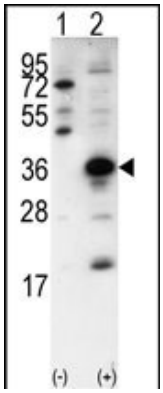
The Drosophila embryonic protein snail is a zinc finger transcriptional repressor which downregulates the expression of ectodermal genes within the mesoderm. The nuclear protein is structurally similar to the Drosophila snail protein, and is also thought to be critical for mesoderm formation in the developing embryo.

References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Deloukas, P., et al., Nature 414(6866):865-871 (2001).
Batlle, E., et al., Nat. Cell Biol. 2(2):84-89 (2000).
Paznekas, W.A., et al., Genomics 62(1):42-49 (1999).
Twigg, S.R., et al., Hum. Genet. 105(4):320-326 (1999).

Images

Western blot analysis of SNAI1(arrow) using rabbit polyclonal SNAI1 Antibody (N-term D24) (Cat.#AP2054d). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the SNAI1 gene (Lane 2) (Origene Technologies).



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