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SNAI1 Antibody (N-term D24)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2054a

Product Information

Application	WB, IHC-P, E
Primary Accession	O95863
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	29083
Antigen Region	9-39

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 9-39 amino acids from the N-terminal region of human SNAI1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
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 D24) 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.

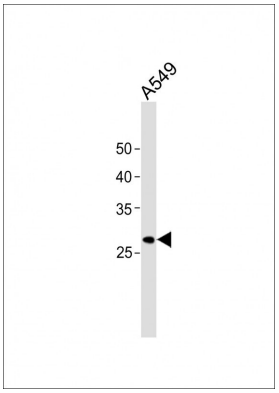
Background

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

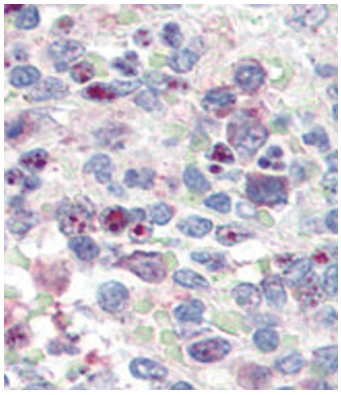
References

Imai, T., et al., Am. J. Pathol. 163(4):1437-1447 (2003). Yokoyama, K., et al., Int. J. Oncol. 22(4):891-898 (2003). Guaita, S., et al., J. Biol. Chem. 277(42):39209-39216 (2002). Blanco, M.J., et al., Oncogene 21(20):3241-3246 (2002). Okubo, T., et al., Cancer Res. 61(4):1338-1346 (2001).

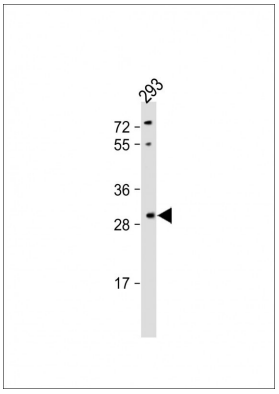
Images



All lanes: Anti-SNAI1 Antibody (N-term D24) at 1:1000 dilution + A549 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: 29 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human Spleen tissue reacted with SNAI1 antibody (N-term D24) (Cat.#AP2054a), 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.



All lanes : Anti-SNAI1 Antibody (N-term D24) at 1:1000 dilution Lane 1: 293 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size :29 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Cluster Analysis According to Immunohistochemistry is a Robust Tool for Non-Small Cell Lung Cancer and Reveals a Distinct, Immune Signature-defined Subgroup
- Evaluating the Epithelial-Mesenchymal Program in Human Breast Epithelial Cells Cultured in Soft Agar Using a Novel Macromolecule Extraction Protocol
- Pharmacokinetic evaluation and antitumor potency of liposomal nanoparticle encapsulated cisplatin targeted to CD24-positive cells in ovarian cancer
- Integrin linked kinase regulates endosomal recycling of N-cadherin in melanoma cells
- Positive Correlative over-Expression between eIF4E and Snail in Nasopharyngeal Carcinoma Promotes its Metastasis and Resistance to Cisplatin.
- Reactive oxygen species induce epithelial □mesenchymal transition, glycolytic switch, and mitochondrial repression through the Dlx □2/Snail signaling pathways in MCF □7 cells.
- Dihydrotestosterone increases the risk of bladder cancer in men.
- Inhibition of ATM reverses EMT and decreases metastatic potential of cisplatin-resistant lung cancer cells through JAK/STAT3/PD-L1 pathway.
- FOSB □PCDHB13 Axis Disrupts the Microtubule Network in Non-Small Cell Lung Cancer.
- The epithelial mesenchymal transition process in wilms tumor: a study based on a xenograft model.
- Inhibition of p53 induces invasion of serous borderline ovarian tumor cells by accentuating PI3K/Akt-mediated suppression of E-cadherin.
- Loss of 15-hydroxyprostaglandin dehydrogenase increases prostaglandin E2 in pancreatic tumors.
- Pin1 promotes transforming growth factor-beta-induced migration and invasion.
- Epithelial mesenchymal transition in human ocular chronic graft-versus-host disease.
- Anti-invasive activity of histone deacetylase inhibitors via the induction of Egr-1 and the modulation of tight junction-related proteins in human hepatocarcinoma cells.
- Up-regulation of alpha5-integrin by E-cadherin loss in hypoxia and its key role in the migration of extravillous trophoblast cells during early implantation.
- Human mesenchymal stem cells induce E-cadherin degradation in breast carcinoma spheroids by activating ADAM10.
- Small C-terminal domain phosphatase enhances snail activity through dephosphorylation.
- Aberrant activation of hedgehog signaling pathway in ovarian cancers: effect on prognosis, cell invasion and differentiation.
- Beta-catenin activation and epithelial-mesenchymal transition in the pathogenesis of pterygium.
- Myofibroblast transdifferentiation of mesothelial cells is mediated by RAGE and contributes to peritoneal fibrosis in uraemia.
- Hepatocyte growth factor induces cell scattering through MAPK/Egr-1-mediated upregulation of Snail.
- MTA3 regulates CGB5 and Snail genes in trophoblast.
- FOXM1 Promotes Lung Adenocarcinoma Invasion and Metastasis by Upregulating SNAIL.

- Dlx-2 is implicated in TGF-β- and Wnt-induced epithelial-mesenchymal, glycolytic switch, and mitochondrial repression by Snail activation.
- Possible involvement of epithelial-mesenchymal transition in fibrosis associated with IgG4-related Mikulicz\'s disease.
- Suppression of FOXQ1 in benzyl isothiocyanate-mediated inhibition of epithelial-mesenchymal transition in human breast cancer cells.
- Effective Targeting of Estrogen Receptor-Negative Breast Cancers with the Protein Kinase D Inhibitor CRT0066101.
- Axl mediates tumor invasion and chemosensitivity through PI3K/Akt signaling pathway and is transcriptionally regulated by slug in breast carcinoma.
- Nuclear expression of snail is an independent negative prognostic factor in human breast cancer.
- BMP-7 Attenuated Silica-induced Pulmonary Fibrosis through Modulation of the Balance between TGF-β/Smad and BMP-7/Smad Signaling Pathway.
- αB-Crystallin Regulates Subretinal Fibrosis by Modulation of Epithelial-Mesenchymal Transition.
- Bone morphogenetic protein-7 prevented epithelial-mesenchymal transition in RLE-6TN cells.
- Role of estrogen receptors and Src signaling in mechanisms of bone metastasis by estrogen receptor positive breast cancers.
- Integrin-linked kinase regulates cadherin switch in bladder cancer.
- Decitabine inhibits tumor cell proliferation and up-regulates E-cadherin expression in Epstein-Barr virus-associated gastric cancer.
- Single-Cell Analyses Reveal Mechanisms of Cancer Stem Cell Maintenance and Epithelial-Mesenchymal Transition in Recurrent Bladder Cancer
- MiR-26a-5p from HucMSC-derived extracellular vesicles inhibits epithelial mesenchymal transition by targeting Adam17 in silica-induced lung fibrosis

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.