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SNAI1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1497a

Product Information

Application	WB, E
Primary Accession	O95863
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6D2
Isotype	IgG1
Calculated MW	29083
Description	Snail is a zinc-finger transcription factor that can repress E-cadherin transcription. Downregulation of E-cadherin is associated with epithelial-mesenchymal transition during embryonic development, a process also exploited by invasive cancer cells . Indeed, loss of E-cadherin expression is correlated with the invasive properties of some tumors and there is a considerable inverse correlation between Snail and E-cadherin mRNA levels in epithelial tumor cell lines . In addition, Snail blocks the cell cycle and confers resistance to cell death . Phosphorylation of Snail by GSK-3 and PAK1 regulates its stability, cellular localization and function .Tissue specificity: Expressed in a variety of tissues with the highest expression in kidney.
Immunogen	Purified recombinant fragment of human SNAI1 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	6615
Other Names	Zinc finger protein SNAI1, Protein snail homolog 1, Protein sna, SNAI1, SNAH
Dilution	WB~~1/500 - 1/2000 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SNAI1 Antibody 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.

References

1. Exp Cell Res. 2008 Aug 1;314(13):2448-53. 2. Mol Cell Biol. 2008 Aug;28(15):4772-81.

Images

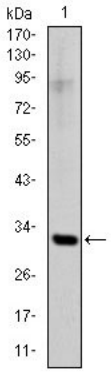
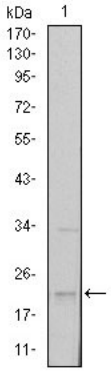


Figure 1: Western blot analysis using SNAI1 mAb against human SNAI1 (AA: 2-264) recombinant protein. (Expected MW is 31.3 kDa)

Figure 2: Western blot analysis using SNAI1 mouse mAb against NTERA-2 cell lysate.



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