

**INSIG1 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8940a**

**Specification**

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**INSIG1 Antibody (N-term) - Product Information**

Application	WB, IHC-P, FC,E
Primary Accession	<a href="#">O15503</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	29987
Antigen Region	36-63

**INSIG1 Antibody (N-term) - Additional Information**

**Gene ID** 3638

**Other Names**

Insulin-induced gene 1 protein, INSIG-1, INSIG1

**Target/Specificity**

This INSIG1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 36-63 amino acids from the N-terminal region of human INSIG1.

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100  
FC~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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**

INSIG1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**INSIG1 Antibody (N-term) - Protein Information**

**Name** INSIG1 {ECO:0000303|PubMed:9268630, ECO:0000312|HGNC:HGNC:6083}

**Function** Oxysterol-binding protein that mediates feedback control of cholesterol synthesis by

controlling both endoplasmic reticulum to Golgi transport of SCAP and degradation of HMGCR (PubMed:[12202038](#), PubMed:[12535518](#), PubMed:[16168377](#), PubMed:[16399501](#), PubMed:[16606821](#), PubMed:[32322062](#)). Acts as a negative regulator of cholesterol biosynthesis by mediating the retention of the SCAP-SREBP complex in the endoplasmic reticulum, thereby blocking the processing of sterol regulatory element-binding proteins (SREBPs) SREBF1/SREBP1 and SREBF2/SREBP2 (PubMed:[12202038](#), PubMed:[16399501](#), PubMed:[32322062](#)). Binds oxysterol, including 25-hydroxycholesterol, regulating interaction with SCAP and retention of the SCAP-SREBP complex in the endoplasmic reticulum (PubMed:[32322062](#)). In presence of oxysterol, interacts with SCAP, retaining the SCAP-SREBP complex in the endoplasmic reticulum, thereby preventing SCAP from escorting SREBF1/SREBP1 and SREBF2/SREBP2 to the Golgi (PubMed:[15899885](#), PubMed:[32322062](#)). Sterol deprivation or phosphorylation by PCK1 reduce oxysterol-binding, disrupting the interaction between INSIG1 and SCAP, thereby promoting Golgi transport of the SCAP-SREBP complex, followed by processing and nuclear translocation of SREBF1/SREBP1 and SREBF2/SREBP2 (PubMed:[32322062](#)). Also regulates cholesterol synthesis by regulating degradation of HMGCR: initiates the sterol-mediated ubiquitin-mediated endoplasmic reticulum-associated degradation (ERAD) of HMGCR via recruitment of the reductase to the ubiquitin ligases AMFR/gp78 and/or RNF139 (PubMed:[12535518](#), PubMed:[16168377](#), PubMed:[22143767](#)). Also regulates degradation of SOAT2/ACAT2 when the lipid levels are low: initiates the ubiquitin-mediated degradation of SOAT2/ACAT2 via recruitment of the ubiquitin ligases AMFR/gp78 (PubMed:[28604676](#)).

#### Cellular Location

Endoplasmic reticulum membrane; Multi-pass membrane protein

#### Tissue Location

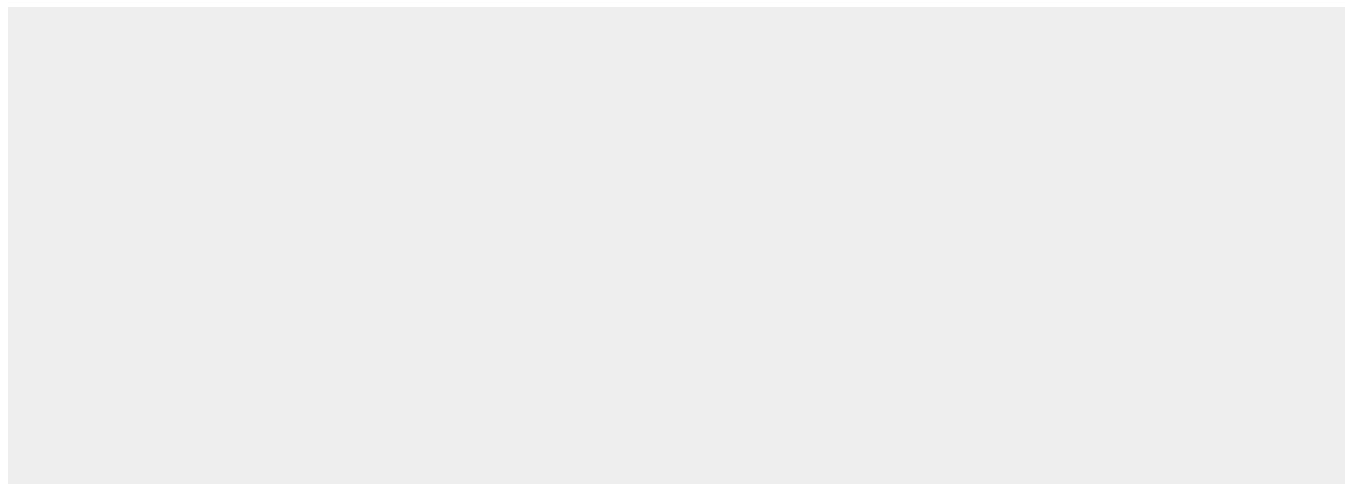
Expressed in all tissues tested with highest expression in the liver.

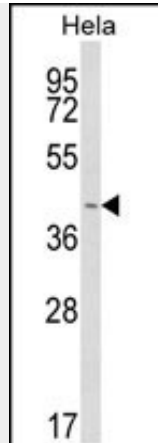
#### INSIG1 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

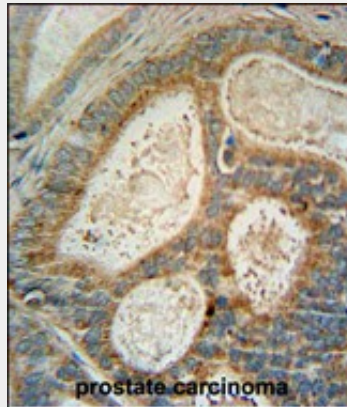
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### INSIG1 Antibody (N-term) - Images

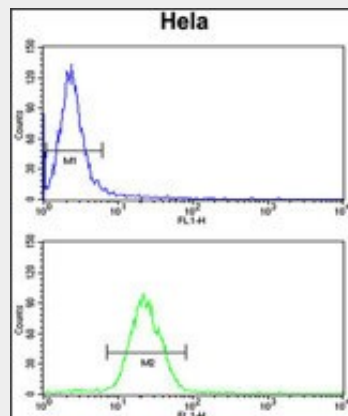




Western blot analysis of INSIG1 Antibody (N-term) (Cat. #AP8940a) in HeLa cell line lysates (35ug/lane). INSIG1 (arrow) was detected using the purified Pab.



INSIG1 Antibody (N-term) (Cat. #AP8940a) immunohistochemistry analysis in formalin fixed and paraffin embedded human prostate carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the INSIG1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



INSIG1 Antibody (N-term) (Cat.#AP8940a) flow cytometry analysis of HeLa cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

### **INSIG1 Antibody (N-term) - Background**

INSIG1 is an insulin-induced protein. This protein encodes an endoplasmic reticulum (ER) membrane protein that plays a critical role in regulating cholesterol concentrations in cells. This

protein binds to the sterol-sensing domains of SREBP cleavage-activating protein (SCAP) and HMG CoA reductase, and is essential for the sterol-mediated trafficking of the two proteins.

#### **INSIG1 Antibody (N-term) - References**

Smith, E.M., et.al., J. Lipid Res. 51 (4), 701-708 (2010)  
Liu, X., et.al., Atherosclerosis 208 (2), 421-426 (2010)