

INSIG1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP8940a**Specification**

INSIG1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [O15503](#)**INSIG1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 3638**Other Names**

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

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8940a](/products/AP8940a) was selected from the N-term region of human INSIG1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

INSIG1 Antibody (N-term) Blocking Peptide - 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](http://www.uniprot.org/citations/12202038), PubMed: [12535518](http://www.uniprot.org/citations/12535518), PubMed: [16168377](http://www.uniprot.org/citations/16168377), PubMed: [16399501](http://www.uniprot.org/citations/16399501), PubMed: [16606821](http://www.uniprot.org/citations/16606821), PubMed: [32322062](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/12202038), PubMed: [12202038](http://www.uniprot.org/citations/12202038)).

href="http://www.uniprot.org/citations/16399501" target="_blank">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) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

INSIG1 Antibody (N-term) Blocking Peptide - Images

INSIG1 Antibody (N-term) Blocking Peptide - 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) Blocking Peptide - References

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