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Insig1 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10665

Specification

Insig1 Antibody - Product Information

Application	**WB**
Primary Accession	Q08755
Other Accession	NP_071787
Reactivity	**Human, Mouse, Rat, Hamster, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**28232**

Insig1 Antibody - Additional Information

Gene ID 64194

Application & Usage

Western blotting (0.5-4 µg/ml). However, the optimal concentrations should be determined individually. The antibody recognizes ~30 kDa InSig-1 and its precursor (~50 kDa) in samples from human, mouse and rat origins. Reactivity to other species has not been tested.

Other Names
CL-6 , INSIG1 , MGC1405

Target/Specificity
Insig1

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Insig1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Insig1 Antibody - Protein Information

Name Insig1 {ECO:0000312|RGD:708457}

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. 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. Binds oxysterol, including 25- hydroxycholesterol, regulating interaction with SCAP and retention of the SCAP-SREBP complex in the endoplasmic reticulum. 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. 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. 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. 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.

Cellular Location
Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:O15503}; Multi-pass membrane protein {ECO:0000250|UniProtKB:O15503}

Tissue Location
Highly expressed in liver and kidney.

Insig1 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Insig1 Antibody - Images

Insig1 Antibody - Background

Insulin-induced gene (InSig) localizes in the endoplasmic recticulum(ER) and is highly expressed in the liver and fibroblast cell lines. InSig1 and InSig2 play important roles in the regulation of cholesterol biosynthesis. Sterol induces InSig1 binding to the sterol-sensing domain of SREBP cleavage-activating protein (SCAP). Both InSig1 and Insig2 prevent the export of SCAP from the ER

and thus, inhibit cholesterol synthesis by preventing the proteolytic cleavage of SREBPs by the Golgi enzymes.