Insig1 (Phospho-Ser207) Antibody

Catalog No: #SAB663

Package Size: #SAB663 100ul

Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

Description

Product Name	Insig1 (Phospho-Ser207) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	The antibody was purified from rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Applications	WB
Species Reactivity	Human
Specificity	Insig1(Phospho-Ser207) Antibody detects endogenous levels of Insig1 only when phosphorylated at serine 207.
Immunogen Description	A synthesized peptide derived from human Insig1 around the phosphorylation site of S207.
Conjugates	Unconjugated
Other Names	Insulin-induced gene 1 protein,INSIG-1
Calculated MW	30 kDa
SDS-PAGE MW	30 kDa
Concentration	1 mg/ml
Formulation	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl,0.02% sodium azide.
Storage	Store at --20°C/1 year

Application Details

Western Blot: 1/500 - 1/2000

Background

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).

Published Papers

el at., Prognostic Impact of PCK1 Protein Kinase Activity-Dependent Nuclear SREBP1 Activation in Non-Small-Cell Lung Carcinoma. In Front Oncol on 2021 Mar 26 by Fei Shao, Xueli Bian,et al..PMID:33842305, , (2021)

PMID:33842305

Daqian Xu;Zheng Wang;Yan Xia;Fei Shao;Weiya Xia;Yongkun Wei;Xinjian Li;Xu Qian;JongHo Lee;Linyong Du;Yanhua Zheng;Guishuai Lv;Jiashiun Leu;Hongyang Wang;Dongming Xing;Tingbo Liang;MienChie Hung;Zhimin Lu el at., The gluconeogenic enzyme PCK1 phosphorylates INSIG1/2 for lipogenesis, , (2020)

PMID:32322062

Note: This product is for in vitro research use only and is not intended for use in humans or animals.