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Insig2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58480

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q9Y5U4
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	24778
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Insig2
Epitope Specificity	65-160/225
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Endoplasmic reticulum membrane; Multi-pass membrane protein.
SIMILARITY	Belongs to the INSIG family.
SUBUNIT	Binds to the SCAP-SREBF2 complex only in the presence of sterols. Interacts with RNF139.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Insig2 is highly similar to the protein product encoded by gene Insig1. Both Insig1 protein and Insig2 protein are endoplasmic reticulum proteins that block the processing of sterol regulatory element binding proteins (SREBPs) by binding to SREBP cleavage-activating protein (SCAP), and thus prevent SCAP from escorting SREBPs to the Golgi.

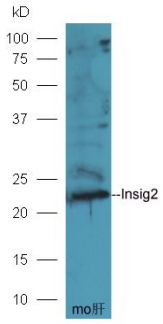
Additional Information

Gene ID	51141
Other Names	Insulin-induced gene 2 protein, INSIG-2, INSIG2 {ECO:0000303|PubMed:12242332, ECO:0000312|HGNC:HGNC:20452}
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	INSIG2 {ECO:0000303|PubMed:12242332, ECO:0000312|HGNC:HGNC:20452}
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:12242332, 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:32322062). Binds oxysterol, including 22- hydroxycholesterol, 24-hydroxycholesterol, 25-hydroxycholesterol and 27-hydroxycholesterol, regulating interaction with SCAP and retention of the SCAP-SREBP complex in the endoplasmic reticulum (PubMed:17428920, PubMed:26160948, 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:32322062). Sterol deprivation or phosphorylation by PCK1 reduce oxysterol-binding, disrupting the interaction between INSIG2 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 ligase RNF139 (PubMed:16606821, PubMed:22143767).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein

Images



Sample: Liver (Mouse) Lysate at 40 ug
Primary: Anti-Insig2 (AP58480) at 1/300 dilution
Secondary: HRP conjugated Goat-Anti-rabbit IgG (bs-0295G-HRP) at 1/5000 dilution
Predicted band size: 25 kD
Observed band size: 23 kD