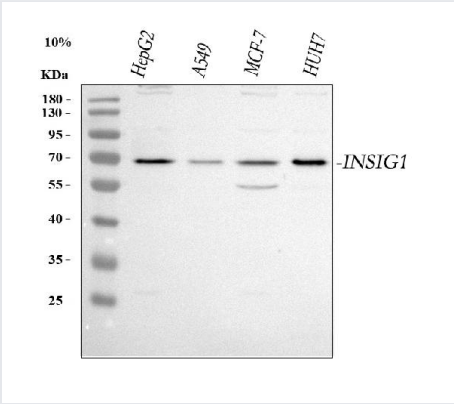
INSIG1 Antibody – Rabbit Polyclonal

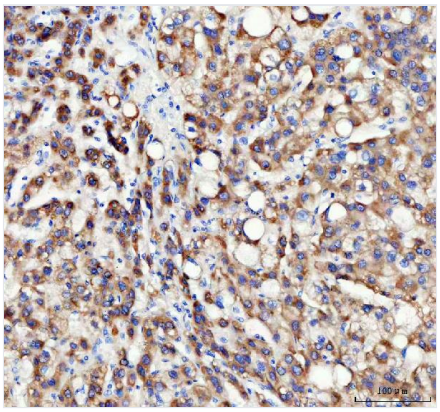
PRODUCT OVERVIEW

Product Name	INSIG1, Polyclonal Antibody
Full Product Name	Anti-INSIG1 Antibody Picoband
Product Gene Name	anti-INSIG1 antibody
Product Synonym Names	Serine/threonine-protein kinase AtPK1/AtPK6; 70 kDa ribosomal protein S6 kinase 1 antibody, KS6B1_HUMAN antibody, p70 alpha antibody, P70 beta 1 antibody, p70 ribosomal S6 kinase alpha antibody, p70 ribosomal S6 kinase beta 1 antibody, p70 S6 kinase alpha antibody, P70 S6 Kinase antibody, p70 S6 kinase alpha 1 antibody, p70 S6 kinase alpha 2 antibody, p70 S6K antibody, p70 S6K-alpha antibody, p70 S6KA antibody, p70(S6K) alpha antibody, p70(S6K)-alpha antibody, p70-alpha antibody, p70-S6K 1 antibody, p70-S6K antibody, P70S6K antibody, P70S6K1 antibody, p70S6Kb antibody, PS6K antibody, Ribosomal protein S6 kinase 70kDa polypeptide 1 antibody, Ribosomal protein S6 kinase beta 1 antibody, Ribosomal protein S6 kinase beta-1 antibody, Ribosomal protein S6 kinase I antibody, RPS6KB1 antibody, S6K antibody, S6K-beta-1 antibody, S6K1 antibody, Serine/threonine kinase 14 alpha antibody, Serine/threonine-protein kinase 14A antibody, STK14A antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	Expressed in all tissues.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	29,987 Da
Chromosome Location	Chromosome: 7; NC_000007.13 (155089486..155101945). Location: 7q36
OMIM	602055
3D Structure	ModBase 3D Structure for O15503
Immunogen	E coli-derived human INSIG1 recombinant protein (Position: M1-R87).
Subcellular Localization	Cytoplasm, Nucleus
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross reactivity with other proteins.
Protein Function	Downstream effector of TOR signaling pathway involved in osmotic stress response. Could be involved in the control of plant growth and development. Phosphorylates the ribosomal proteins P14, P16 and S6. Functions as a repressor of cell proliferation and required for maintenance of chromosome stability and ploidy levels through the RBR1-E2F pathway.
Product Categories/Family for anti-INSIG1 antibody	Primary Antibodies; Signal Transduction; Signaling Pathway; Small G Proteins
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-INSIG1 antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunofluorescence (IF), Flow Cytometry (FC/FACS), ELISA (EIA)

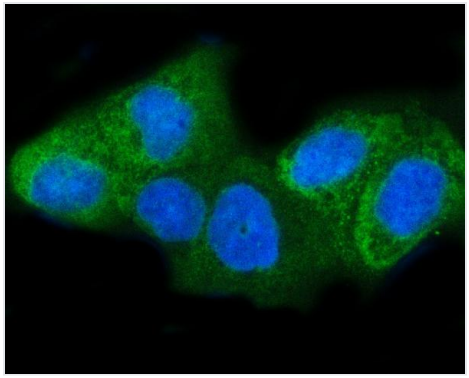
Application Notes for anti-INSIG1 antibody	WB: 0.25-0.5ug/ml, Human IHC: 2-5ug/ml, Human ICC/IF: 5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-INSIG1 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product References and Citations for anti-INSIG1 antibody	1. Diamond, R. H., Du, K., Lee, V. M., Mohn, K. L., Haber, B. A., Tewari, D. S., Taub, R. Novel delayed-early and highly insulin-induced growth response genes: identification of HRS, a potential regulator of alternative pre-mRNA splicing. J. Biol. Chem. 268: 15185-15192, 1993.2. Engelking, L. J., Liang, G., Hammer, R. E., Takaishi, K., Kuriyama, H., Evers, B. M., Li, W.-P., Horton, J. D., Goldstein, J. L., Brown, M. S. Schoenheimer effect explained--feedback regulation of cholesterol synthesis in mice mediated by Insig proteins. J. Clin. Invest. 115: 2489-2498, 2005.3. Gong, Y., Lee, J. N., Brown, M. S., Goldstein, J. L., Ye, J. Juxtamembranous aspartic acid in Insig-1 and Insig-2 is required for cholesterol homeostasis. Proc. Nat. Acad. Sci. 103: 6154-6159, 2006.
Other Notes	Small volumes of anti-INSIG1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for INSIG1 purchase	MBS1758255 is an antibody targeting INSIG1. Also known as Anti-INSIG1 Antibody Picoband. Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-INSIG1 antibody
Figure 1. Western blot analysis of INSIG1 using anti-INSIG1 antibody (MBS1758255).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human HepG2 whole cell lysates,Lane 2: human A549 whole cell lysates,Lane 3: human MCF-7 whole cell lysates,Lane 4: human HUH7 whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-INSIG1 antigen affinity purified polyclonal antibody (#MBS1758255) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for INSIG1 at approximately 66 kDa. The expected band size for INSIG1 is at 30 kDa.

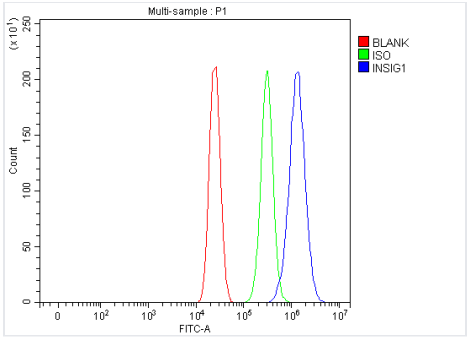


Immunohistochemistry (IHC) of anti-INSIG1 antibody
Figure 2. IHC analysis of INSIG1 using anti-INSIG1 antibody (MBS1758255).INSIG1 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-INSIG1 Antibody (MBS1758255) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (#MBS176453) with DAB as the chromogen.



Immunofluorescence (IF) of anti-INSIG1 antibody

Figure 3. IF analysis of INSIG1 using anti-INSIG1 antibody (MBS1758255).INSIG1 was detected in an immunocytochemical section of HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (#MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-INSIG1 Antibody (MBS1758255) overnight at 4 degree C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry (FC/FACS) of anti-INSIG1 antibody

Figure 4. Flow Cytometry analysis of MCF-7 cells using anti-INSIG1 antibody (MBS1758255).Overlay histogram showing MCF-7 cells stained with MBS1758255 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-INSIG1 Antibody (MBS1758255, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for INSIG1. It may not necessarily be applicable to this product.

NCBI GI #	241982794
NCBI GeneID	3638
NCBI Accession #	NP_938150.2
UniProt Primary Accession #	O15503
UniProt Secondary Accession #	Q53XW8; Q9BUV5; A8K6L0
UniProt Related Accession #	O15503
GenBank Nucleotide #	NM_198336.2
NCBI Official Full Name	insulin-induced gene 1 protein isoform 2
NCBI Official Synonym Full Names	insulin induced gene 1
NCBI Official Symbol	INSIG1
NCBI Official Synonym Symbols	CL6; CL-6; MGC1405
UniProt Protein Name	Insulin-induced gene 1 protein
Protein Family	Insulin-induced gene 1 protein
UniProt Gene Name	INSIG1
UniProt Entry Name	INSI1_HUMAN
NCBI Protein Information	insulin-induced gene 1 protein; OTTHUMP00000216469; OTTHUMP00000216470; OTTHUMP00000216471; INSIG-1 membrane protein
NCBI Summary for INSIG1	Oxysterols regulate cholesterol homeostasis through the liver X receptor (LXR)- and sterol regulatory element-binding protein (SREBP)-mediated signaling pathways. This gene is an insulin-induced gene. It 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. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq]

UniProt Comments for INSIG1	INSIG1: Mediates feedback control of cholesterol synthesis by controlling SCAP and HMGCR. Functions by blocking the processing of sterol regulatory element-binding proteins (SREBPs). Capable of retaining the SCAP-SREBF2 complex in the ER thus preventing it from escorting SREBPs to the Golgi. Initiates the sterol-mediated ubiquitin-mediated endoplasmic reticulum-associated degradation (ERAD) of HMGCR via recruitment of the reductase to the ubiquitin ligase, AMFR/gp78. May play a role in growth and differentiation of tissues involved in metabolic control. May play a regulatory role during G0/G1 transition of cell growth. Belongs to the INSIG family. Protein type: Membrane protein, integral; Membrane protein, multi-pass Chromosomal Location of Human Ortholog: 7q36 Cellular Component: endoplasmic reticulum membrane; endoplasmic reticulum Molecular Function: protein binding Biological Process: cell proliferation; inner ear morphogenesis; triacylglycerol metabolic process; metabolic process; middle ear morphogenesis; palate development; negative regulation of fat cell differentiation; SREBP-mediated signaling pathway; cholesterol biosynthetic process; negative regulation of fatty acid biosynthetic process
Research Articles on INSIG1	**1.** Observational study of gene-disease association, gene-gene interaction, gene-environment interaction, and pharmacogenomic / toxicogenomic. (HuGE Navigator)
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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