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## anti-IRS1 antibody (N-Term)



Overview



Image



Publication



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Quantity:	100 μg
Target:	IRS1
Binding Specificity:	AA 106-122, N-Term
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This IRS1 antibody is un-conjugated

#### Application: Western Blotting (WB)

#### Product Datails

Product Details	
Purpose:	Rabbit IgG polyclonal antibody for Insulin receptor substrate 1(IRS1) detection. Tested with WB in Human, Mouse, Rat.
Immunogen:	A synthetic peptide corresponding to a sequence at the N-terminus of mouse IRS1(106-122aa WYQALLQLHNRAKAHHD), identical to the related rat sequence, and different from the related human sequence by one amino acid.
Sequence:	WYQALLQLHN RAKAHHD
Isotype:	IgG
Cross-Reactivity (Details):	Predicted Cross Reactivity: mouse, rat  No cross reactivity with other proteins.  Predicted Cross Reactivity: Species predicted to be fit for the product based on sequence similarities.

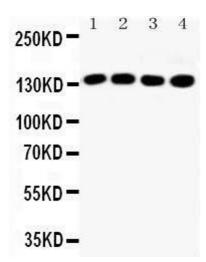
Product Details	
Characteristics:	Rabbit IgG polyclonal antibody for Insulin receptor substrate 1(IRS1) detection. Tested with WB
	in Human,Mouse,Rat.
	Gene Name: insulin receptor substrate 1
	Protein Name: Insulin receptor substrate 1
Purification:	Immunogen affinity purified.
Target Details	
Target:	IRS1
Alternative Name:	IRS1 (IRS1 Products)
Background:	Insulin receptor substrate 1(IRS-1) is a signalling adapter protein that in humans is encoded by the IRS-1 gene. It is mapped to 2q36.3. This gene exhibited no intrinsic enzyme activity, and it can serve as a docking protein involved in binding and activating other signal transduction molecules after being phosphorylated on tyrosine by insulin receptor kinase. IRS1 plays a key role in transmitting signals from the insulin and insulin-like growth factor-1(IGF-1) receptors to intracellular pathways PI3K/Akt and Erk MAP kinase pathways. IRS1 also plays important biological function for both metabolic and mitogenic(growth promoting) pathways. In addition to those, IRS1 is a key regulator of PI3K within malignant cells.  Synonyms: HIRS 1 antibody HIRS1 antibody Insulin Receptor Substrate 1 antibody IRS 1 antibody IRS1 antibody OTTHUMP00000164234 antibody
UniProt:	P35569
Pathways:	Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Positive Regulation of Peptide Hormone Secretion, Hormone Transport, Negative Regulation of Hormone Secretion, Response to Growth Hormone Stimulus, Carbohydrate Homeostasis, Regulation of Carbohydrate Metabolic Process
Application Details	
Application Notes:	WB: Concentration: 0.1-0.5 μg/mL, Tested Species: Human, Predicted Species: Mouse, Rat
	Notes: Tested Species: Species with positive results. Predicted Species: Species predicted to be
	fit for the product based on sequence similarities.
	Other applications have not been tested. Optimal dilutions should be determined by end users.
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Antibody can be supported by chemiluminescence kit ABIN921124 in WB.

Comment:

## **Application Details**

Restrictions:	For Research Use only
Handling	
Format:	Lyophilized
Reconstitution:	Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.
Concentration:	500 μg/mL
Buffer:	Each vial contains 5 mg BSA, 0.9 mg NaCl, 0.2 mg Na2HPO4, 0.05 mg Thimerosal, 0.05 mg Sodium azide.
Preservative:	Thimerosal (Merthiolate), Sodium azide
Precaution of Use:	This product contains Sodium azide and Thimerosal (Merthiolate): POISONOUS AND HAZARDOUS SUBSTANCES which should be handled by trained staff only.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C/-20 °C
Storage Comment:	At -20°C for one year. After reconstitution, at 4°C for one month.
	It can also be aliquotted and stored frozen at -20 $^{\circ}\text{C}$ for a longer time. Avoid repeated freezing and thawing.
Publications	
Product cited in:	You, Zhang, Li, Li, Li, Li, Zhu, Peng, Sun: "Cloning and molecular characterization of
	phospholipase D (PLD) delta gene from longan (Dimocarpus longan Lour.)." in: Molecular
	biology reports, Vol. 41, Issue 7, pp. 4351-60, (2014) (PubMed).



## Western Blotting

Image 1.





#### Successfully validated (Immunohistochemistry (IHC))

by Human Protein Atlas

Report Number: 300033

Date: Dec 13 2016

Target:	IRS1
Method validated:	Immunohistochemistry (IHC)
Positive Control:	colon, tonsil
Notes:	Passed. ABIN3042564 staining is consistent with RNA-seq data and published literature.
Primary Antibody:	ABIN3042564
Secondary Antibody:	HRP polymer (ThermoFisher Scientific, TL-125-PH)
Protocol:	Sample preparation:

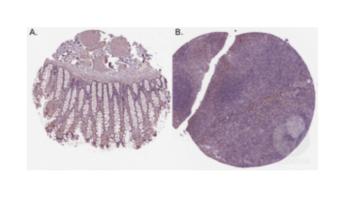
- Sample preparation:
  - Fixation and TMA preparation according to PMID: 22688270.
  - o Cut 4µm TMA sections using a waterfall microtome (ThermoFisher Scientific, HM355S).
  - Dry sections ON at RT and then back them for 12-24h at 50°C.
- · Deparaffinization and rehydration in xylene and graded alcohol series:
  - o xylene twice for 3min.
  - 100% ethanol for 1min.
  - o 95% ethanol for 1min.
  - o 0.3% H<sub>2</sub>O<sub>2</sub> in 95% ethanol for 5min to block endogenous peroxidase.
  - 70% ethanol for 1min.
  - 50% ethanol for 1min.
  - distilled H<sub>2</sub>O for 2min.
- Antigen Retrieval by Heat Induced Epitope Retrieval (HIER):
  - Boil the sections in Lab Vision Citrate buffer pH6.0 (ThermoFisher Scientific, TA-250-PM1X) for 4min at 125°C in a decloaking chamber (Biocare Medical).
  - o Allow slides to cool down to 90°C in the decloaking chamber.
- Immunostaining in a Lab Vision Autostainer 480 (ThermorFisher Scientific) at RT with 300µl of reagents for each step:
  - Rinse sections in Lab Vision wash buffer with extra tween added to a final concentration of 0.2% (ThermoFisher Scientific, TA-999-TT and TA-125-TW) wash buffer.
  - o Block sections with Lab Vision Ultra V-Block (ThermoFisher Scientific, TA-125-UB) for 5min.
  - Rinse sections 2x in wash buffer.
  - Incubate sections with primary rabbit anti-IRS1 antibody (antibodies-online, ABIN3042564) diluted 1:1100 for 30min.

- Rinse sections 3x in wash buffer.
- o Incubate sections with labeled HRP polymer (ThermoFisher Scientific, TL-125-PH) for 30min.
- Rinse sections 2x in wash buffer.
- o Develop in DAB Quanto solution (ThermoFisher Scientific, TL-125-QHDX) for 5min.
- Rinse sections in distilled H<sub>2</sub>O.
- · Washing, counterstaining, and coverslipping in Autostainer XL (Leica Biosystems, ST5010) at
  - o Counterstaining in Mayer's hematoxylin plus (HistoLab, 01820) for 7.5min.
  - Rinse sections in tap water for 5min.
  - Rinse sections in lithium carbonate water diluted 1:5 for 5min.
  - Dehydration in graded ethanol series and Neo-Clear (Merck Millipore, 109843) according to the manufacturer recommendations.
  - Automated mounting (Leica Biosystems, CV5030) of coverslip with Pertex (Histolab, 00871).
- Microscopy:
  - Image acquisition on a Leica Aperio AT2 and Aperio Scanscope AT at 20x magnification.

#### **Experimental Notes:**

ABIN3042564 shows nice IRS1 staining in endothelial cells in most tissues as is supported by both literature and RNA-seq data. At lower dilutions the antibody does also show some cytoplasmic staining in the tested tissues.

### Image for Validation report #300033



Validation image no. 1 for anti-Insulin Receptor Substrate 1 (IRS1) (AA 106-122), (N-Term) antibody (ABIN3042564)

Staining of human colon (A.) and tonsil (B.) sections in a tissue microarray with ABIN3042564. See the protocol for detailed information.