

# IRS2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7789B

## Product Information

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Application	IF, WB, IHC-P, E
Primary Accession	<a href="#">Q9Y4H2</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15641
Calculated MW	137334
Antigen Region	1309-1338

## Additional Information

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Gene ID	8660
Other Names	Insulin receptor substrate 2, IRS-2, IRS2
Target/Specificity	This IRS2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1309-1338 amino acids from the C-terminal region of human IRS2.
Dilution	IF~~1:10~50 WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IRS2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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Name	IRS2
Function	Signaling adapter protein that participates in the signal transduction from two prominent receptor tyrosine kinases, insulin receptor/INSR and insulin-like growth factor I receptor/IGF1R (PubMed: <a href="#">25879670</a> ). Plays therefore an important role in development, growth, glucose homeostasis as

well as lipid metabolism (PubMed:[24616100](#)). Upon phosphorylation by the insulin receptor, functions as a signaling scaffold that propagates insulin action through binding to SH2 domain-containing proteins including the p85 regulatory subunit of PI3K, NCK1, NCK2, GRB2 or SHP2 (PubMed:[15316008](#), PubMed:[19109239](#)). Recruitment of GRB2 leads to the activation of the guanine nucleotide exchange factor SOS1 which in turn triggers the Ras/Raf/MEK/MAPK signaling cascade (By similarity). Activation of the PI3K/AKT pathway is responsible for most of insulin metabolic effects in the cell, and the Ras/Raf/MEK/MAPK is involved in the regulation of gene expression and in cooperation with the PI3K pathway regulates cell growth and differentiation. Acts a positive regulator of the Wnt/beta- catenin signaling pathway through suppression of DVL2 autophagy- mediated degradation leading to cell proliferation (PubMed:[24616100](#)). Plays a role in cell cycle progression by promoting a robust spindle assembly checkpoint (SAC) during M-phase (PubMed:[32554797](#)). In macrophages, IL4-induced tyrosine phosphorylation of IRS2 leads to the recruitment and activation of phosphoinositide 3-kinase (PI3K) (PubMed:[19109239](#)).

#### Cellular Location

Cytoplasm, cytosol {ECO:0000250|UniProtKB:P81122}

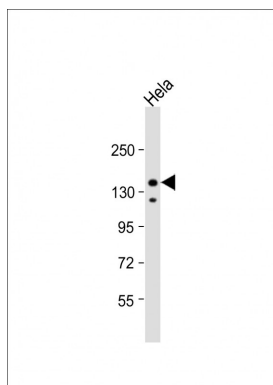
## Background

Insulin receptor substrate 2, a cytoplasmic signaling molecule that mediates effects of insulin, insulin-like growth factor 1, and other cytokines by acting as a molecular adaptor between diverse receptor tyrosine kinases and downstream effectors. This protein is phosphorylated by the insulin receptor tyrosine kinase upon receptor stimulation, as well as by an interleukin 4 receptor-associated kinase in response to IL4 treatment.

## References

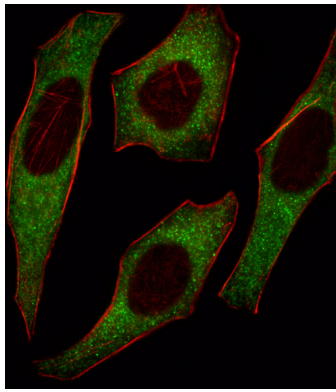
Hagg,D.A., Int. J. Mol. Med. 21 (6), 697-704 (2008)  
Platanias,L.C., J. Biol. Chem. 271 (1), 278-282 (1996)  
Sun,X.J., Nature 377 (6545), 173-177 (1995)

## Images

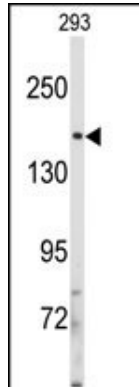


Anti-IRS2 Antibody (C-term) at 1:1000 dilution + HeLa whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 137 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

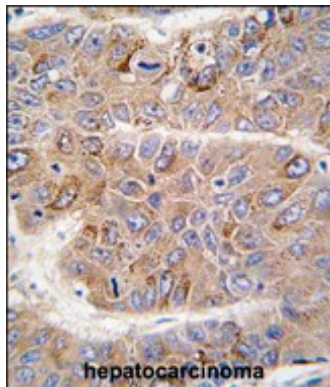
Fluorescent image of HeLa cell stained with IRS2 Antibody (C-term)(Cat#AP7789b).HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with IRS2 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was



counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C).IRS2 immunoreactivity is localized to Cytoplasm significantly.



Western blot analysis of anti-IRS2 Antibody (C-term) (Cat.#AP7789b) in 293 cell line lysates (35ug/lane). IRS2 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with IRS2 antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.