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IRS2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7789B

Product Information

Application	IF, WB, IHC-P, E
Primary Accession	Q9Y4H2
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15641
Calculated MW	137334
Antigen Region	1309-1338

Additional Information

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

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:25879670). 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}

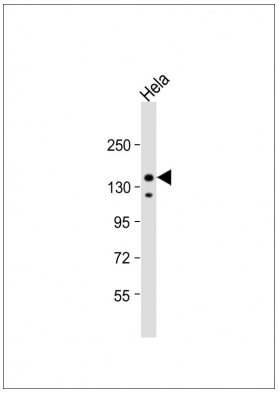
Background

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

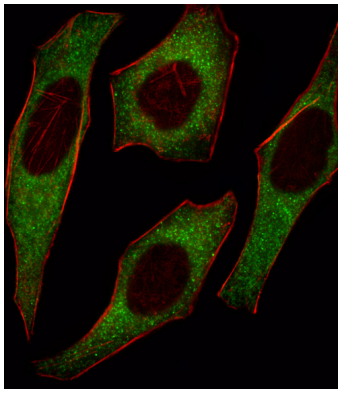
Hagg,D.A., Int. J. Mol. Med. 21 (6), 697-704 (2008)
Platanias,L.C., J. Biol. Chem. 271 (1), 278-282 (1996)
Sun,X.J., Nature 377 (6545), 173-177 (1995)

Images

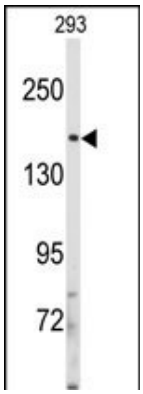


Anti-IRS2 Antibody (C-term) at 1:1000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 137 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

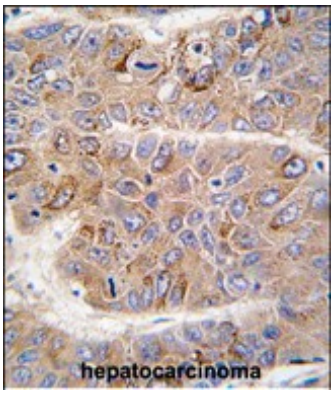
Fluorescent image of Hela cell stained with IRS2 Antibody (C-term)(Cat#AP7789b).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with IRS2 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit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