

# IRS-1 (phospho Ser312) Polyclonal Antibody

Catalog # AP67503

## Product Information

---

<b>Application</b>	WB, IHC-P
<b>Primary Accession</b>	<a href="#">P35568</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	131591

## Additional Information

---

<b>Gene ID</b>	3667
<b>Other Names</b>	IRS1; Insulin receptor substrate 1; IRS-1
<b>Dilution</b>	WB~~Western Blot: 1/500 - 1/2000. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications. IHC-P~~N/A
<b>Format</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
<b>Storage Conditions</b>	-20°C

## Protein Information

---

<b>Name</b>	IRS1
<b>Function</b>	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="#">7541045</a> , PubMed: <a href="#">33991522</a> , PubMed: <a href="#">38625937</a> ). Plays therefore an important role in development, growth, glucose homeostasis as well as lipid metabolism (PubMed: <a href="#">19639489</a> ). 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: <a href="#">11171109</a> , PubMed: <a href="#">8265614</a> ). 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: <a href="#">24616100</a> ).

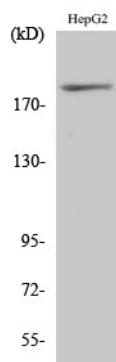
## Cellular Location

Cytoplasm. Nucleus. Note=Nuclear or cytoplasmic localization of IRS1 correlates with the transition from proliferation to chondrogenic differentiation.

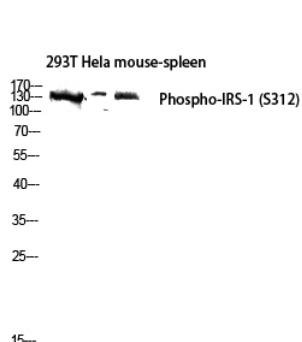
## Background

May mediate the control of various cellular processes by insulin. When phosphorylated by the insulin receptor binds specifically to various cellular proteins containing SH2 domains such as phosphatidylinositol 3-kinase p85 subunit or GRB2. Activates phosphatidylinositol 3-kinase when bound to the regulatory p85 subunit (By similarity).

## Images



Western Blot analysis of various cells using Phospho-IRS-1 (S312) Polyclonal Antibody diluted at 1 : 1000



Western blot analysis of 293T HeLa mouse-spleen lysis using Phospho-IRS-1 (S312) antibody. Antibody was diluted at 1:1000

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