

**IRS-1 (phospho Ser312) Polyclonal Antibody**  
**Catalog # AP67503****Specification****IRS-1 (phospho Ser312) Polyclonal Antibody - Product Information**

Application	WB, IF
Primary Accession	<a href="#">P35568</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

**IRS-1 (phospho Ser312) Polyclonal Antibody - Additional Information****Gene ID** 3667**Other Names**

IRS1; Insulin receptor substrate 1; IRS-1

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications.

IF~~1:50~200

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**IRS-1 (phospho Ser312) Polyclonal Antibody - Protein Information****Name** IRS1**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="http://www.uniprot.org/citations/7541045" target="\_blank">7541045</a>, PubMed:<a href="http://www.uniprot.org/citations/33991522" target="\_blank">33991522</a>, PubMed:<a href="http://www.uniprot.org/citations/38625937" target="\_blank">38625937</a>). Plays therefore an important role in development, growth, glucose homeostasis as well as lipid metabolism (PubMed:<a href="http://www.uniprot.org/citations/19639489" target="\_blank">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="http://www.uniprot.org/citations/11171109" target="\_blank">11171109</a>, PubMed:<a href="http://www.uniprot.org/citations/8265614" target="\_blank">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="http://www.uniprot.org/citations/24616100" target="\_blank">24616100</a>).

#### Cellular Location

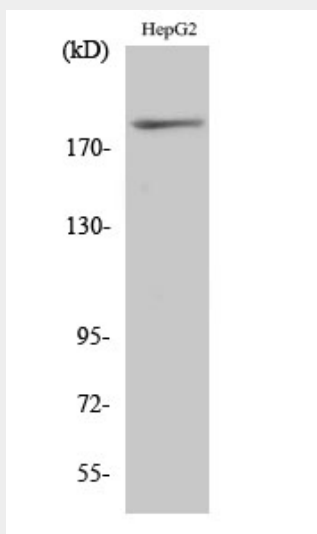
Cytoplasm. Nucleus. Note=Nuclear or cytoplasmic localization of IRS1 correlates with the transition from proliferation to chondrogenic differentiation.

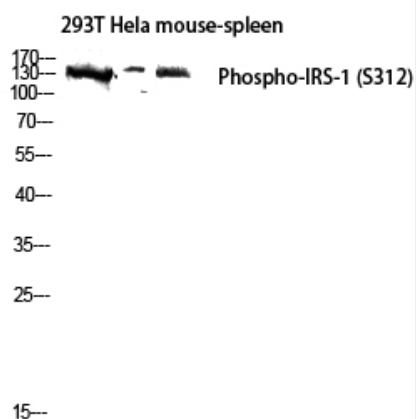
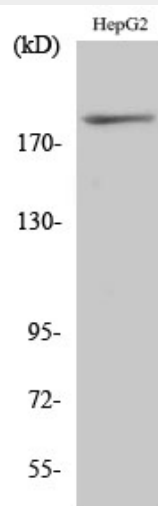
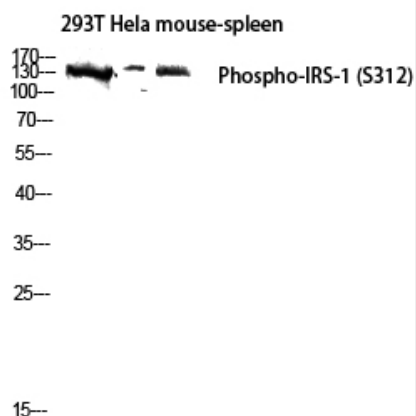
#### IRS-1 (phospho Ser312) Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### IRS-1 (phospho Ser312) Polyclonal Antibody - Images





**IRS-1 (phospho Ser312) Polyclonal Antibody - 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).