

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

Application	WB, IF
Primary Accession	P35568
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:7541045, PubMed:33991522, PubMed:38625937). Plays therefore an important role in development, growth, glucose homeostasis as well as lipid metabolism (PubMed:19639489). 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:11171109, PubMed:8265614). 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).

Cellular Location

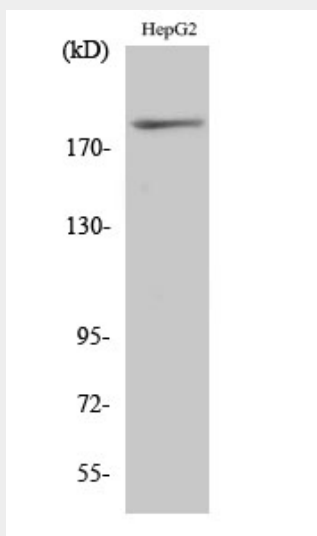
Cytoplasm. Nucleus. Note=Nuclear or cytoplasmic localization of IRS1 correlates with the transition from proliferation to chondrogenic differentiation.

IRS-1 (phospho Ser312) Polyclonal Antibody - Protocols

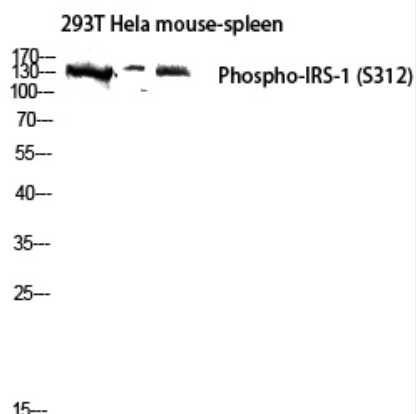
Provided below are standard protocols that you may find useful for product applications.

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

IRS-1 (phospho Ser312) Polyclonal Antibody - Images



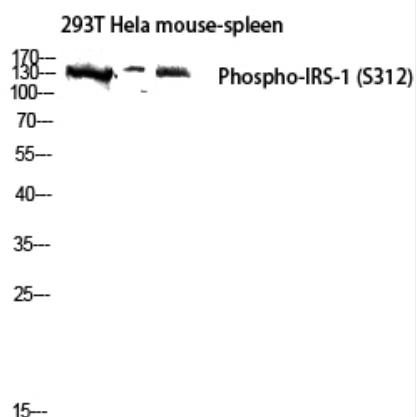
Western Blot analysis of various cells using Phospho-IRS-1 (S312) Polyclonal Antibody diluted at 1:1000



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



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

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).