10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IRS2 Antibody

Rabbit mAb
Catalog # AP91662

Product Information

Application	WB, IHC, IF, FC, ICC, IHF
Primary Accession	Q9Y4H2
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	Insulin receptor substrate 2; IRS 2; IRS-2;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	137334

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 FC 1:100
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human IRS2
Description	May mediate the control of various cellular processes by insulin.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

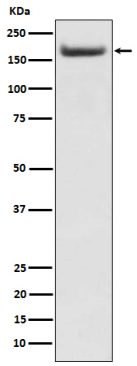
Protein Information

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}

Images



Western blot analysis of IRS2 expression in HEK293 cell treated with insulin.