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| <b>Product name:</b>     | IRS-1 (phospho Ser794) Rabbit Polyclonal Antibody                                                                                           |
| <b>Cat number:</b>       | ABN04883                                                                                                                                    |
| <b>Conjugate:</b>        | Unconjugated                                                                                                                                |
| <b>Size:</b>             | 100µL                                                                                                                                       |
| <b>Clone:</b>            | Polyclonal                                                                                                                                  |
| <b>Concentration:</b>    | 1mg/ml                                                                                                                                      |
| <b>Host:</b>             | Rabbit                                                                                                                                      |
| <b>Isotype:</b>          | IgG                                                                                                                                         |
| <b>Immunogen:</b>        | The antiserum was produced against synthesized peptide derived from human IRS-1 around the phosphorylation site of Ser794. AA range:760-809 |
| <b>Reactivity:</b>       | Human,Mouse,Rat                                                                                                                             |
| <b>Applications:</b>     | WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:20000-1:40000                                                                   |
| <b>Molecular Weight:</b> | 170kDa                                                                                                                                      |
| <b>Purification:</b>     | Affinity purification                                                                                                                       |
| <b>Form:</b>             | Liquid                                                                                                                                      |
| <b>Buffer:</b>           | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.                                                          |
| <b>Storage:</b>          | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.                                                |

**Background:**

This gene encodes a protein which is phosphorylated by insulin receptor tyrosine kinase. Mutations in this gene are associated with type II diabetes and susceptibility to insulin resistance. [provided by RefSeq, Nov 2009],disease:Polymorphisms in IRS1 may be involved in the etiology of non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853],,function: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.,polymorphism:The Arg-971 polymorphism impairs the ability of insulin to stimulate glucose transport, glucose transporter translocation, and glycogen synthesis by affecting the PI3K/AKT1/GSK3 signaling pathway. The polymorphism at Arg-971 may contribute to the in vivo insulin resistance observed in carriers of this variant. Arg-971 could contribute to the risk for atherosclerotic cardiovascular diseases associated with non-insulin-dependent diabetes mellitus (NIDDM) by producing a cluster of insulin resistance-related metabolic abnormalities. In insulin-stimulated human endothelial cells from carriers of the Arg-971 polymorphism, genetic impairment of the IRS1/PI3K/PDPK1/AKT1 insulin signaling cascade results in impaired insulin-stimulated nitric oxide (NO) release and suggested that this may be a mechanism through which the Arg-971 polymorphism contributes to the genetic predisposition to develop endothelial dysfunction and cardiovascular disease. The Arg-971 polymorphism not only reduces phosphorylation of the substrate but allows IRS1 to act as an inhibitor of PI3K, producing global insulin resistance.,PTM:Phosphorylation of Tyr-896 is required for GRB2-binding.,PTM:Serine phosphorylation of IRS1 is a mechanism for insulin resistance. Ser-312 phosphorylation inhibits insulin action through disruption of IRS1 interaction with the insulin receptor.,similarity:Contains 1 IRS-type PTB domain.,similarity:Contains 1 PH domain.,subunit:Interacts with the NPXY motif of tyrosine-phosphorylated IGF1R and INSR via the PTB domain. Binds to phosphatidylinositol 3-kinase p85 subunit via the phosphorylated YXXM motifs. Binds ROCK1. Binds to UBTF and PIK3CA in nuclear extracts (By similarity). Interacts with SOCS7.,