# IRS1 ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified

## Catalog no. 700662

(See product label for lot information)

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|---|---|
| **Clone/PAD:** | 21H10L24 |
| **Isotype:** | IgG |
| **Gene ID:** | 3667 |
| **Protein Acc. no.**: | P35568 |
| **Qty**: | 100 µg |
| **Volume:** | 200 µL |
| **Concentration:** | 0.5 mg/mL |

**Formulation**
PBS + 0.09% sodium azide

**Application**
For use in Western Blotting

**Reactivity**
This antibody is specific for human IRS1

**Immunogen**
Recombinant protein corresponding to amino acids 694–875 of human IRS1

**Sequence Identity**
Human

**Storage**
2–8°C for up to 1 month, –20°C for long term storage. Avoid repeated freezing and thawing.

**Expiration Date**
Expires one year from date of receipt when stored as instructed.

**Background**
Insulin Receptor Substrate-1 (IRS-1) is a 180 kDa cytoplasmic protein involved in metabolic and proliferative signaling by insulin, IL-4, and other cytokines(1,2). The main function of IRS1 is to enhance growth hormone-induced proliferative signaling(3,4). The activated insulin receptor phosphorylates IRS proteins on multiple tyrosine residues that serve as docking sites for downstream mediators of metabolic actions such as phosphatidylinositol-3 kinase (4,5). IRS proteins also undergo serine phosphorylation, which regulates its function (6). Phosphorylation of human IRS-1 at serines, such as 312 and 616 (serines 307 and 612 in mouse), results in the impairment of metabolic insulin signaling pathways (7).

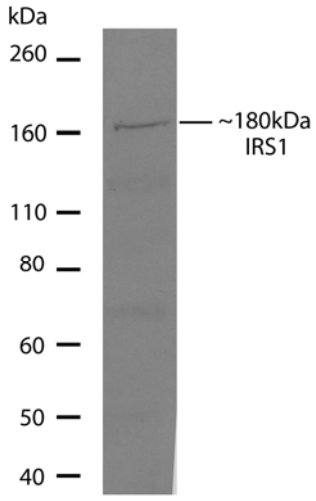
**References**


1. Zick, Y. (2004) Uncoupling insulin signalling by serine/threonine phosphorylation: a molecular basis for insulin resistance. Biochem. Soc. Trans. 32(Pt 5):812-816.
2. Hers, I., et al. (2002) Reciprocal feedback regulation of insulin receptor and insulin receptor substrate tyrosine phosphorylation by phosphoinositide 3-kinase in primary adipocytes. Biochem. J. 368(Pt. 3):875-884.
3. Fujioka, T., et al. (2001) Further evidence for the involvement of insulin receptor substrates in epidermal growth factor-induced activation of phosphatidylinositol 3-kinase. Eur. J. Biochem. 268(15):4158-4168.
4. Aguirre, V., et al. (2002) Phosphorylation of Ser307 in IRS-1 blocks interactions with the insulin receptor and inhibits insulin action. J. Biol. Chem. 277(2):1531-1537.
5. Reiss, K., et al. (2001) Mechanisms of regulation of cell adhesion and motility by insulin receptor substrate-1 in prostate cancer cells. Oncogene 20:490-500.
6. Ravichandran, L.V., et al. (2001) Protein kinase C-zeta phosphorylates insulin receptor substrate-1 and impairs its ability to activate phosphatidylinositol 3-kinase in response to insulin. J. Biol. Chem. 276(5):3543-3549.
7. Li, J., et al. (1999) Modulation of insulin receptor substrate-1 tyrosine phosphorylation by an Akt/phosphatidylinositol 3-kinase pathway. J. Biol. Chem. 274(14):9351-9356.


**Applications:**

| | Species | Test Material | Concentration |
|---|---|---|---|
| **Western Blotting** | Human | MCF7 | 4–5 µg/mL |


**For Research Use Only. CAUTION: Not for human or animal therapeutic or diagnostic use.**




**Western Blot of IRS1 labeled with IRS1 Rabbit Recombinant Monoclonal Antibody (Cat. no. 700662).**
IRS1 Rabbit Recombinant Monoclonal Antibody (5 µg/mL) was used to detect IRS1 in MCF7 Cell Lysate (60 µg/lane). The western was performed using the WesternBreeze® kit with NBT/BCIP as the substrate (Cat. no. WB7105).

**Explanation of symbols**

| Symbol | Description | Symbol | Description |
|---|---|---|---|
| REF | Catalogue Number | LOT | Batch code |
| RUO | Research Use Only | IVD | *In vitro* diagnostic medical device |
| | Use by | | Temperature limitation |
| | Manufacturer | EC REP | European Community authorised representative |
| [-] | Without, does not contain | [+] | With, contains |
| Protect from Light | Protect from light | | Consult accompanying documents |
| | Directs the user to consult instructions for use (IFU), accompanying the product. | | |

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