

# IRS1 Rabbit Recombinant Oligoclonal Antibody – Purified

Catalog no. 710009

(See product label for lot information)



**Clone/PAD:** 21HCLC  
**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

## Immunogen sequence

Amino acids 694-875

## Sequence Identity

Human

## Sequence Homology

Mouse

## Expected Reactivity

Based on sequence identity and similarity, reactivity to Human and Mouse are expected.

## 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.

Following applications had been tested during development. To make sure the consistency and reliability in the future lots, each lot is tested with antigen ELISA for specificity and potency. Each lot is also tested with SDS-PAGE, to ensure high purity.

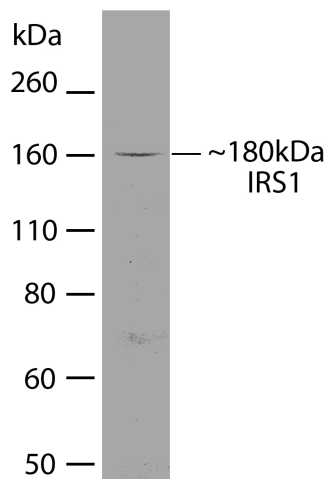
## Applications:

	Species	Test Material	Concentration
Western Blotting	Human	MCF7	4-5 µg/ml

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**Western Blot of IRS1 labeled with IRS1 Rabbit Recombinant Oligoclonal Antibody (Cat. No. 710009).**

IRS1 Rabbit Recombinant Oligoclonal Antibody (5 µg/ml) was used to label IRS1 in MCF7 Cell Lysate (30 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
	Catalogue Number		Batch code
	Research Use Only		<i>In vitro</i> diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		European Community authorised representative
	Without, does not contain		With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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