

## IRS1 Protein

Recombinant protein expressed in E. coli cells

**Catalog # I40-35G**

Lot # H2799-7

### Product Description

Recombinant human IRS1 (1-355) was expressed in E. coli cells using an N-terminal GST tag. The gene accession number is [NM\\_005544](#).

### Gene Aliases

HIRS-1

### Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, and 25% glycerol.

### Storage and Stability

Store product at  $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

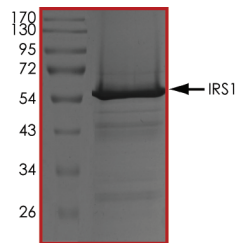
### Scientific Background

IRS1 is the substrate for the insulin tyrosine kinase receptor and is found in a variety of insulin-responsive cells and tissues. IRS1 protein has no intrinsic enzymatic activity but acts as a docking protein, via the SH2 domains, for mediating the insulin downstream signaling events. IRS1 has been shown to associate with the 14-3-3 family of proteins and this could play a role in the regulation of insulin sensitivity by interrupting the association between the insulin receptor and IRS1 (1). IRS1 may be associated with colorectal cancer and diet and related factors may affect the risk by modifying plasma insulin levels. Thus, the inter-individual variation in insulin signaling mediated by IRS1 may play a plausible role in the development of colorectal cancer (2).

### References

- Ogihara, T. et al: 14-3-3 protein binds to insulin receptor substrate-1, one of the binding sites of which is in the phosphotyrosine binding domain. J. Biol. Chem. 272: 25267-25274, 1997.
- Slattery, M.L. et al: Genetic variation in IGF1, IGFBP3, IRS1, IRS2 and risk of breast cancer in women living in outhwestern United States. Breast Cancer Res Treat. 2007.

### Purity



The purity was determined to be **>90%** by densitometry. Approx. MW **65 kDa**.

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Catalog #	I40-35G
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Purity	>90%
Concentration	0.2 µg/µl
Stability	1yr at $-70^{\circ}\text{C}$ from date of shipment
Storage & Shipping	Store product at $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on dry ice.

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