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#12879**IRS-1 Inhibition Antibody Sampler Kit**

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1 Kit (7 x 20 microliters)

For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-IRS-1 (Ser302) (34C7) Rabbit mAb	2491	20 µl	180 kDa	Rabbit IgG
Phospho-IRS-1 (Ser307) Antibody	2381	20 µl	180 kDa	Rabbit
Phospho-IRS-1 (Ser318) (D51C3) Rabbit mAb	5610	20 µl	180 kDa	Rabbit IgG
Phospho-IRS-1 (Ser612) (C15H5) Rabbit mAb	3203	20 µl	180 kDa	Rabbit IgG
Phospho-IRS-1 (Ser636/639) Antibody	2388	20 µl	180 kDa	Rabbit
Phospho-IRS-1 (Ser1101) Antibody	2385	20 µl	180 kDa	Rabbit
IRS-1 (D23G12) Rabbit mAb	3407	20 µl	180 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The IRS-1 Inhibition Antibody Sampler Kit provides an economical means to evaluate insulin signaling negative feedback loops via phosphorylation of various IRS-1 serine residues. The kit includes enough antibody to perform two western blot experiments with each primary antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

Insulin receptor substrate 1 (IRS-1) is one of the major substrates of the insulin receptor kinase (1). IRS-1 contains multiple tyrosine phosphorylation motifs that serve as docking sites for SH2-domain containing proteins that mediate the metabolic and growth-promoting functions of insulin (2-4). IRS-1 also contains over 30 potential serine/threonine phosphorylation sites, many of which are related to negative feedback loops activated during insulin signaling. Ser302 (human Ser307) of IRS-1 is regulated by FOXO1 (5), IKK γ , and MYO1C (6). Ser307 (human Ser312) of IRS-1 is phosphorylated by JNK (7) and IKK (8). PKC phosphorylates mouse IRS-1 at Ser318 (human Ser323) by insulin receptor activation or by other stimulation such as TPA, IL-6, and retinoic acid treatment (9-12). The PKC and mTOR pathways mediate phosphorylation of IRS-1 at Ser612 (human Ser616) and Ser632/635 (human Ser636/639), respectively (13,14). Phosphorylation of IRS-1 at Ser1097 (human Ser1101) is mediated by PKC θ and results in an inhibition of insulin signaling in the cell, suggesting a potential mechanism for insulin resistance in some models of obesity (15).

Background References

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