Phospho-IRS-1 (Ser612) (L7B8)
Mouse mAb

For Research Use Only. Not For Use In Diagnostic Procedures.

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

Species cross-reactivity is determined by western blot.

Anti-mouse secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:
Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Applications

<table>
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<tr>
<th>Applications</th>
<th>Species Cross-Reactivity*</th>
<th>Molecular Wt.</th>
<th>Isotype</th>
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<tbody>
<tr>
<td>Endogenous</td>
<td>H, M, R</td>
<td>180 kDa</td>
<td>Mouse IgG2a**</td>
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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. Ser307 of IRS-1 is phosphorylated by JNK (5) and IKK (6) while Ser789 is phosphorylated by SIK-2, a member of the AMPK family (7). The PKC and mTOR pathways mediate phosphorylation of IRS-1 at Ser612 and Ser636/639, respectively (8,9). Phosphorylation of IRS-1 at Ser1101 is mediated by PKCθ and results in an inhibition of insulin signaling in the cell, suggesting a potential mechanism for insulin resistance in some models of obesity (10).

Specificity/Sensitivity: Phospho-IRS-1 (Ser612) (L7B8) Mouse mAb detects endogenous IRS-1 only when phosphorylated at serine 612.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser612 of mouse IRS-1.

Background References:

Western blot analysis of extracts from differentiated C2C12 and CHO-IR/IRS-1 (CHO transfected with IR and IRS-1 cDNA) untreated or treated with insulin and λ phosphatase, using Phospho-IRS-1 (Ser612) (L7B8) Mouse mAb (upper), or IRS-1 Antibody #2382 (lower).

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