IRS-1 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. 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: IRS-1 Antibody detects endogenous levels of total IRS-1. It does not cross-react with IRS-2, -3 or -4.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the carboxy-terminal sequence of human IRS-1. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

Recommended Antibody Dilutions:
Western blotting 1:1000
Immunoprecipitation 1:50

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.

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

**Species cross-reactivity is determined by western blot.

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

Applications Cross-Reactivity Key:
W—Western
IP—Immunoprecipitation
HC—Histchemistry
IgP—Chromatin Immunoprecipitation
IF—Immunofluorescence
F—Flow cytometry
E-P—ELISA-Peptide

Species Cross-Reactivity Key:
H—human
M—mouse
R—rat
Hm—hamster
Mk—monkey
M—mink
C—chicken
Dm—D. melanogaster
X—Xenopus
Z—zebrafish
B—bovine
Dg—dog
Pg—pig
Sc—S. cerevisiae
Ce—C. elegans
Hr—horse
All—all species expected

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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