


<b>#3066</b> Store at -20C	Phospho-IRS-1 (Tyr1222) Antibody	
	<b>Orders:</b> 877-616-CELL (2355) orders@cellsignal.com	
	<b>Support:</b> 877-678-TECH (8324)	
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	180	Rabbit	#P35568	3667

#### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

#### 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.

#### Specificity/Sensitivity

Phospho-IRS-1 (Tyr1222) Antibody detects endogenous levels of IRS-1 only when phosphorylated at Tyr1222. The antibody may cross-react with other activated receptor tyrosine kinases (RTKs) and docking proteins.

#### Species predicted to react based on 100% sequence homology

Mouse, Rat

#### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr1222 of human IRS-1. Antibodies are purified by protein A and peptide affinity chromatography.

#### 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 PKC $\theta$  and results in an inhibition of insulin signaling in the cell, suggesting a potential mechanism for insulin resistance in some models of obesity (10).

Phosphorylation of tyrosine 1222 of IRS-1 was identified in insulin stimulated cells (11). Phosphorylated Tyr1222 provides a docking site for the SH2 domain of PTP2C, which may mediate dephosphorylation of IRS-1 and lead to negative feedback of insulin signaling (12).

#### Background References

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- Rocchi, S. et al. (1995) *Endocrinology* 136, 5291-5297.

#### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

#### Western Blot Buffer

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

#### Applications Key

**W:** Western Blotting

#### Cross-Reactivity Key

**H:** Human

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