

#2381 Store at -20C

Phospho-IRS-1 (Ser307) Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R	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 (Ser307) Antibody detects endogenous IRS-1 only when phosphorylated at serine 307. This antibody does not cross-react with other related phospho-proteins.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser307 of mouse IRS-1 (equivalent to Ser312 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 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).	
Background References	<ol style="list-style-type: none"> 1. Sun, X.J. et al. (1991) <i>Nature</i> 352, 73-77. 2. Sun, X.J. et al. (1992) <i>J. Biol. Chem.</i> 267, 22662-22672. 3. Myers Jr., M.G. et al. (1993) <i>Endocrinology</i> 132, 1421-1430. 4. Wang, L.M. et al. (1993) <i>Science</i> 261, 1591-1594. 5. Rui, L. et al. (1997) <i>J. Clin. Invest.</i> 107, 181-189. 6. Gao, Z. et al. (2002) <i>J. Biol. Chem.</i> 277, 48115-48121. 7. Horike, N. et al. (2003) <i>J. Biol. Chem.</i> 278, 18440-18447. 8. Ozes, O.N. et al. (2001) <i>Proc. Natl. Acad. Sci. USA</i> 98, 4640-4645. 9. De Fea, K. and Ruth, R.A. (1997) <i>Biochemistry</i> 36, 12939-12947. 10. Li, Y. et al. (2004) <i>J. Biol. Chem.</i> 279, 45304-45307. 	

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	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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