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#3203

## Phospho-IRS-1 (Ser612) (C15H5) Rabbit mAb



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

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	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.	
<b>Specificity / Sensitivity</b>	Phospho-IRS-1 (Ser612) (C15H5) Rabbit mAb detects endogenous levels of IRS-1 only when phosphorylated at Ser612.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser612 of mouse IRS-1.	
<b>Background</b>	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). Phosphorylation of IRS-1 at Ser612 by MAPK downregulates insulin signaling and may be part of a response to high glucose/glucosamine levels (11).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Sun, X.J. et al. (1991) <i>Nature</i> 352, 73-77.</li> <li>2. Sun, X.J. et al. (1992) <i>J. Biol. Chem.</i> 267, 22662-22672.</li> <li>3. Myers Jr., M.G. et al. (1993) <i>Endocrinology</i> 132, 1421-1430.</li> <li>4. Wang, L.M. et al. (1993) <i>Science</i> 261, 1591-1594.</li> <li>5. Rui, L. et al. (1997) <i>J. Clin. Invest.</i> 107, 181-189.</li> <li>6. Gao, Z. et al. (2002) <i>J. Biol. Chem.</i> 277, 48115-48121.</li> <li>7. Horike, N. et al. (2003) <i>J. Biol. Chem.</i> 278, 18440-18447.</li> <li>8. Ozes, O.N. et al. (2001) <i>Proc. Natl. Acad. Sci. USA</i> 98, 4640-4645.</li> <li>9. De Fea, K. and Ruth, R.A. (1997) <i>Biochemistry</i> 36, 12939-12947.</li> <li>10. Li, Y. et al. (2004) <i>J. Biol. Chem.</i> 279, 45304-45307.</li> <li>11. Andreozzi, F. et al. (2004) <i>Endocrinology</i> 145, 2845-57.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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