

**#3203**  
Store at -20C**Phospho-IRS-1 (Ser612) (C15H5)  
Rabbit mAb****Cell Signaling**  
TECHNOLOGY®**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

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>Sun, X.J. et al. (1991) <i>Nature</i> 352, 73-77.</li> <li>Sun, X.J. et al. (1992) <i>J. Biol. Chem.</i> 267, 22662-22672.</li> <li>Myers Jr., M.G. et al. (1993) <i>Endocrinology</i> 132, 1421-1430.</li> <li>Wang, L.M. et al. (1993) <i>Science</i> 261, 1591-1594.</li> <li>Rui, L. et al. (1997) <i>J. Clin. Invest.</i> 107, 181-189.</li> <li>Gao, Z. et al. (2002) <i>J. Biol. Chem.</i> 277, 48115-48121.</li> <li>Horike, N. et al. (2003) <i>J. Biol. Chem.</i> 278, 18440-18447.</li> <li>Ozes, O.N. et al. (2001) <i>Proc. Natl. Acad. Sci. USA</i> 98, 4640-4645.</li> <li>De Fea, K. and Ruth, R.A. (1997) <i>Biochemistry</i> 36, 12939-12947.</li> <li>Li, Y. et al. (2004) <i>J. Biol. Chem.</i> 279, 45304-45307.</li> <li>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
<b>Trademarks and Patents</b>	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom. All other trademarks are the property of their respective owners. Visit <a href="http://cellsignal.com/trademarks">cellsignal.com/trademarks</a> for more information.

**Limited Uses**

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.