

#4137 Store at -20°C

Phospho-HSL (Ser565) Antibody



✓ 100 µl
(10 western blots)

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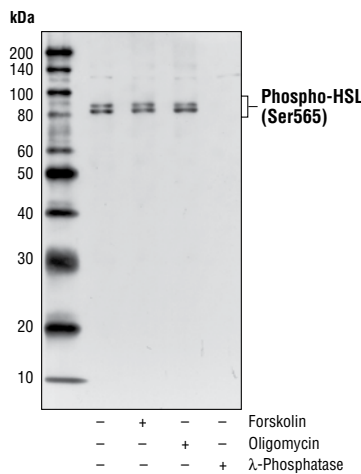
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	M, (H, R)	81, 83 kDa	Rabbit**

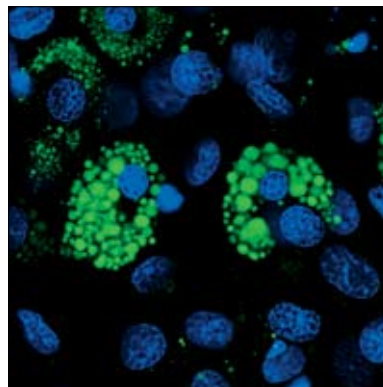
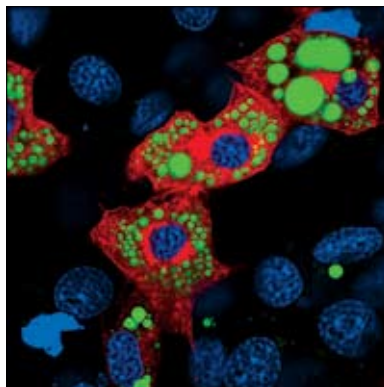
Background: HSL (hormone-sensitive lipase) catalyzes the hydrolysis of triacylglycerol, the rate-limiting step in lipolysis. Lipolytic stimuli activate adenylyl cyclase and thus increase intracellular cAMP levels, which in turn activates protein kinase A (PKA). PKA phosphorylates HSL at Ser563, Ser659 and Ser660, which stimulates HSL activity (1,2). In contrast, AMPK phosphorylates HSL at Ser565, which reduces HSL phosphorylation at Ser563 by PKA and inhibits HSL activity (2,3). Recent work indicates that phosphorylation at Ser600 by p44/42 MAPKs also enhances the enzymatic activity of HSL (4).

Specificity/Sensitivity: Phospho-HSL (Ser565) Antibody detects endogenous levels of HSL only when phosphorylated at Ser565 by AMPK. This antibody does not cross-react with Ser563 phosphorylated HSL.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser552 of human HSL (Ser563 of rat HSL). Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from differentiated 3T3-L1 cells treated with forskolin, oligomycin or λ-phosphatase, using Phospho-HSL (Ser565) Antibody.



Confocal immunofluorescent analysis of 3T3-L1 cells, untreated (left) or phosphatase-treated (right), labeled with Phospho-HSL (Ser565) Antibody (red) showing cytoplasmic localization in differentiated cells. Lipid droplets have been labeled with BODIPY® 493/503 (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #3991
Swiss-Prot Acc. #Q05469

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.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:250

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.

Background References:

- (1) Degerman, E. et al. (1990) *Proc. Natl. Acad. Sci. USA* 87, 533-537.
- (2) Anthonsen, M.W. et al. (1998) *J. Biol. Chem.* 273, 215-221.
- (3) Garton, A.J. and Yeaman, S.J. (1990) *Eur. J. Biochem.* 191, 245-250.
- (4) Greenberg, A.S. et al. (2001) *J. Biol. Chem.* 276, 45456-45461.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—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 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.