

#4139 Store at -20°C

Phospho-HSL (Ser563) Antibody


Cell Signaling
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: WB	Reactivity: M	Sensitivity: Endogenous	MW (kDa): 81, 83	Source: Rabbit	UniProt ID: #Q05469	Entrez-Gene Id: 3991
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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-HSL (Ser563) Antibody detects endogenous levels of HSL only when phosphorylated at Ser563 by PKA. This antibody does not cross-react with Ser565 phosphorylated HSL.	
Species predicted to react based on 100% sequence homology:	Human, Rat	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser552 of human HSL (equivalent to Ser563 of rat HSL). Antibodies are purified by protein A and peptide affinity chromatography.	
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 activate 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).	
Background References	<ol style="list-style-type: none"> 1. Degerman, E. et al. (1990) <i>Proc. Natl. Acad. Sci. USA</i> 87, 533-37. 2. Anthonen, M.W. et al. (1998) <i>J. Biol. Chem.</i> 273, 215-21. 3. Garton, A.J. and Yeaman, S.J. (1990) <i>Eur. J. Biochem.</i> 191, 245-50. 4. Greenberg, A.S. et al. (2001) <i>J. Biol. Chem.</i> 276, 45456-61. 	

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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