

Phospho-IRAK1 (Thr209) Antibody



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

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	90-105	Rabbit	#P51617	3654

Product Usage Information	Application	Dilution
	Western Blotting	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-IRAK1 (Thr209) Antibody recognizes endogenous levels of IRAK1 protein only when phosphorylated at Thr209. This antibody does not detect unmodified 75 kDa IRAK1. This antibody cross-reacts with a 35 kDa protein of unknown origin.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr209 of human IRAK1 protein.	
Background	<p>Interleukin-1 (IL-1) receptor-associated kinase (IRAK) is a serine/threonine-specific kinase that can be coprecipitated in an IL-1-inducible manner with the IL-1 receptor (1). The mammalian family of IRAK molecules contains four members (IRAK1, IRAK2, IRAK3/IRAK-M, and IRAK4). The binding of IL-1 to IL-1 receptor type I (IL-1RI) initiates the formation of a complex that includes IL-1RI, AcP, MyD88, and IRAKs (2). IRAK undergoes autophosphorylation shortly after IL-1 stimulation. The subsequent events involve IRAK dissociation from the IL-1RI complex, its ubiquitination, and its association with two membrane-bound proteins: TAB2 and TRAF6. The resulting IRAK-TRAF6-TAB2 complex is then released into the cytoplasm where it activates protein kinase cascades, including TAK1, IKKs, and the stress-activated kinases (3).</p> <p>Upon IL-1R/Toll-Like Receptor (TLR) ligation, IRAK1 and IRAK4 are rapidly recruited to the receptor by the adaptor MyD88 (4). IRAK1 is phosphorylated by IRAK4 at Thr209 and Thr387, followed by sequential autohyperphosphorylation in various domains (5).</p>	
Background References	<ol style="list-style-type: none"> 1. Dinarello, C.A. (1996) <i>Blood</i> 87, 2095-147. 2. Takaesu, G. et al. (2001) <i>Mol Cell Biol</i> 21, 2475-84. 3. Janssens, S. and Beyaert, R. (2003) <i>Mol Cell</i> 11, 293-302. 4. Gottipati, S. et al. (2008) <i>Cell Signal</i> 20, 269-76. 5. Kollwe, C. et al. (2004) <i>J Biol Chem</i> 279, 5227-36. 	

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	W: Western Blotting
Cross-Reactivity Key	H: Human
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