


Store at -20C #7652	Phospho-IRAK4 (Thr345/Ser346) Antibody	
		Orders: 877-616-CELL (2355) orders@cellsignal.com
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	55	Rabbit	#Q9NWZ3	51135
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-IRAK4 (Thr345/Ser346) Antibody recognizes endogenous levels of IRAK4 protein only when phosphorylated at Thr345 and Ser346. The antibody may also react with single phosphorylation of IRAK4 at Ser346.					
Species predicted to react based on 100% sequence homology	Mouse, Rat, Monkey, Bovine, Dog					
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Thr345/Ser346 of human IRAK4 protein. Antibodies are purified by protein A and peptide affinity chromatography.					
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 ligation, IRAK1 and IRAK4 are rapidly recruited to the receptor by the adaptor MyD88 (4). IRAK1 is phosphorylated by IRAK4 at Thr209 and Thr387 (5), followed by sequential autohyperphosphorylation in various domains.</p>					
Background References	<ol style="list-style-type: none"> Dinarello, C.A. (1996) <i>Blood</i> 87, 2095-147. Takaesu, G. et al. (2001) <i>Mol Cell Biol</i> 21, 2475-84. Janssens, S. and Beyaert, R. (2003) <i>Mol Cell</i> 11, 293-302. Gottipati, S. et al. (2008) <i>Cell Signal</i> 20, 269-76. Kollewe, 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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