

#93654 Store at -20C

Phospho-RIP3 (Ser227) (D6W2T) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IF-IC	H	Endogenous	46-62	Rabbit IgG	#Q9Y572	11035

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
	Immunofluorescence (Immunocytochemistry)	1:800 - 1:3200
Storage	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.	
Specificity / Sensitivity	Phospho-RIP3 (Ser227) (D6W2T) Rabbit mAb recognizes endogenous levels of RIP3 protein only when phosphorylated at Ser227. A band is also detected at 30 kDa that appears to be a cleavage product of RIP3.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phospho-peptide corresponding to residues surrounding Ser227 of human RIP3 protein.	
Background	<p>The receptor-interacting protein (RIP) family of serine-threonine kinases (RIP, RIP2, RIP3, and RIP4) are important regulators of cellular stress that trigger pro-survival and inflammatory responses through the activation of NF-κB, as well as pro-apoptotic pathways (1). In addition to the kinase domain, RIP contains a death domain responsible for interaction with the death domain receptor Fas and recruitment to TNF-R1 through interaction with TRADD (2,3). RIP-deficient cells show a failure in TNF-mediated NF-κB activation, making the cells more sensitive to apoptosis (4,5). RIP also interacts with TNF-receptor-associated factors (TRAFs) and can recruit IKKs to the TNF-R1 signaling complex via interaction with NEMO, leading to IκB phosphorylation and degradation (6,7). Overexpression of RIP induces both NF-κB activation and apoptosis (2,3). Caspase-8-dependent cleavage of the RIP death domain can trigger the apoptotic activity of RIP (8).</p> <p>Receptor-interacting protein 3 (RIP3) was originally found to interact with RIP and the TNF receptor complex to induce apoptosis and activation of NF-κB (9,10). Subsequently, it has been shown that the association between RIP and RIP3 is a key component of a signaling pathway that results in programmed necrosis (necroptosis), a necrotic-like cell death induced by TNF in the presence of caspase inhibitors (11-13). RIP3 is phosphorylated at Ser227 and targets the phosphorylation of mixed lineage kinase domain-like protein (MLKL), which is critical for necroptosis (14). In mice, RIP3 is phosphorylated at Thr231 and Ser232, leading to association with MLKL and necroptosis (15).</p>	

Background References	<ol style="list-style-type: none"> 1. Meylan, E. and Tschoopp, J. (2005) <i>Trends Biochem Sci</i> 30, 151-9. 2. Hsu, H. et al. (1996) <i>Immunity</i> 4, 387-96. 3. Stanger, B.Z. et al. (1995) <i>Cell</i> 81, 513-23. 4. Ting, A.T. et al. (1996) <i>EMBO J</i> 15, 6189-96. 5. Kelliher, M.A. et al. (1998) <i>Immunity</i> 8, 297-303. 6. Devin, A. et al. (2000) <i>Immunity</i> 12, 419-29. 7. Zhang, S.Q. et al. (2000) <i>Immunity</i> 12, 301-11. 8. Lin, Y. et al. (1999) <i>Genes Dev</i> 13, 2514-26. 9. Yu, P.W. et al. (1999) <i>Curr Biol</i> 9, 539-42. 10. Sun, X. et al. (1999) <i>J Biol Chem</i> 274, 16871-5. 11. Zhang, D.W. et al. (2009) <i>Science</i> 325, 332-6. 12. He, S. et al. (2009) <i>Cell</i> 137, 1100-11. 13. Cho, Y.S. et al. (2009) <i>Cell</i> 137, 1112-23. 14. Sun, L. et al. (2012) <i>Cell</i> 148, 213-27. 15. Chen, W. et al. (2013) <i>J Biol Chem</i> 288, 16247-61.
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Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
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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 **IF-IC:** Immunofluorescence (Immunocytochemistry)

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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