

#3427 Store at -20C

Rad50 Antibody



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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H Mk	Endogenous	153	Rabbit	#Q92878	10111

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	Rad50 antibody detects endogenous levels of total Rad50 protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys713 of human Rad50. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	The DNA repair protein Rad50 is a member of the structural maintenance of chromosomes (SMC) family and plays an important role in cell cycle checkpoint signaling and double-strand break repair in response to DNA damage (1-4). Rad50 forms a complex with Mre11 and NBS1 that becomes activated in response to DNA damage (3). In normal human cells, the MRN complex acts to tether linear DNA molecules, providing a flexible link between DNA ends (1). Genomic instability and cancer have been shown to develop in cells with genetic mutations affecting the proteins in the MRN complex (2). ATM-dependent phosphorylation of Rad50 at Ser635 in response to DNA damage is important in regulating downstream signaling, DNA repair, and checkpoint control (5).	
Background References	<ol style="list-style-type: none"> 1. de Jager, M. et al. (2001) <i>Mol. Cell</i> 8, 1129-35. 2. Elledge, S.J. (1996) <i>Science</i> 274, 1664-1672. 3. Lee, J.H. and Lim, D.S. (2006) <i>FEBS J.</i> 273, 1630-36. 4. Teng, S.C. et al. (2006) <i>J Mol Histol</i> 37, 293-9. 5. Gatei, M. et al. (2011) <i>J Biol Chem</i> 286, 31542-56. 	

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 nonfat dry milk, 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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