

#3049 Store at -20C

Bub3 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 M R Hm Mk	Endogenous	40	Rabbit	#O43684	9184

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	Bub3 Antibody detects endogenous levels of total Bub3 protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to carboxy-terminal residues of human Bub3.	
Background	The Mitotic Checkpoint Complex (MCC), which contains Bub1, Bub1b, Bub3, Mad2, and Cdc20, controls chromosome segregation and monitors kinetochore-microtubule interactions (1). During mitosis, the MCC complex inhibits the ubiquitin ligase activity of the Anaphase Promoting Complex/Cyclosome (APC/C), thereby preventing cells with unaligned chromosomes from prematurely entering anaphase (2). Research studies have shown that Bub1b and Bub1 kinases are mutated in several types of human malignancies including hematopoietic, colorectal, lung, and breast cancers (3). Biallelic mutations in Bub1b have been found in mosaic variegated aneuploidy syndrome and premature chromatid separation syndrome (4). Bub1b mouse germline knockouts are embryonic lethal with heterozygous animals displaying genetic instability, early aging phenotypes, and increased cancer susceptibility (5). Bub3 binds both Bub1 and Bub1b, facilitating their recruitment to kinetochores (6), and is required for functional microtubule-kinetochore interactions (7).	
Background References	<ol style="list-style-type: none"> 1. Fukagawa, T. (2008) <i>Front Biosci</i> 13, 2705-13. 2. Chen, R.H. (2007) <i>J Biomed Sci</i> 14, 475-9. 3. Dai, W. et al. (2004) <i>Cancer Res</i> 64, 440-5. 4. Kops, G.J. et al. (2005) <i>Nat Rev Cancer</i> 5, 773-85. 5. Baker, D.J. et al. (2004) <i>Nat Genet</i> 36, 744-9. 6. Taylor, S.S. et al. (1998) <i>J Cell Biol</i> 142, 1-11. 7. Logarinho, E. et al. (2008) <i>Mol Biol Cell</i> 19, 1798-813. 	

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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