

# Bub3 Antibody

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**For Research Use Only. Not For Use In Diagnostic Procedures.**

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk, Hm	40 kDa	Rabbit**

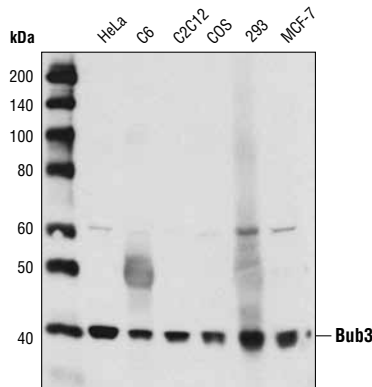
**Background:** The Mitotic Checkpoint Complex (MCC), which contains Bub1, Bub1b, Bub3, Mad2 and Cdc20, controls chromosome segregation and monitors kinetochore-microtubule interactions. (1). This complex inhibits the ubiquitin ligase activity of the Anaphase Promoting Complex/Cyclosome (APC/C) during mitosis to prevent cells with unaligned chromosomes from prematurely entering anaphase (2). 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).

**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 References:

- (1) Fukagawa, T. (2008) *Front Biosci* 13, 2705–13.
- (2) Chen, R.H. (2007) *J Biomed Sci* 14, 475–9.
- (3) Dai, W. et al. (2004) *Cancer Res* 64, 440–5.
- (4) Kops, G.J. et al. (2005) *Nat Rev Cancer* 5, 773–85.
- (5) Baker, D.J. et al. (2004) *Nat Genet* 36, 744–9.
- (6) Taylor, S.S. et al. (1998) *J Cell Biol* 142, 1–11.
- (7) Logarinho, E. et al. (2008) *Mol Biol Cell* 19, 1798–813



Western blot analysis of extracts from various cell types using Bub3 Antibody.

Entrez-Gene ID #9184  
Swiss-Prot Acc. #O43684

**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.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

#### Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.