

**BRCC36 (D5E5H) Rabbit mAb**

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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, IP	H M R Mk	Endogenous	33, 40	Rabbit IgG	#P46736	79184

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:100

**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**

BRCC36 (D5E5H) Rabbit mAb recognizes endogenous levels of total BRCC36 protein. This antibody detects BRCC36 isoform1 and BRCC36 isoform2.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding His251 of human BRCC36 isoform 2 protein.

**Background**

Protein ubiquitination and deubiquitination are reversible processes catalyzed by ubiquitinating enzymes and deubiquitinating enzymes, respectively (1,2). Deubiquitinating enzymes (DUBs) are categorized into five subfamilies based on catalytic domain structure: USP, OTU, MJD, UCH, and JAMM/MPN. BRCC36 is a zinc-dependent DUB belonging to the JAMM/MPN subfamily and participates in DNA damage responses and interferon signaling by specifically catalyzing hydrolysis of K63-linked polyubiquitin chains (3,4). In the nucleus, BRCC36 is part of the BRCA1-A complex that contains RAP80, BRCA1, ABRAXAS, and MERIT40 (5,6). This complex plays a critical role in mediating the cellular repair of DNA double strand breaks induced by ionizing radiation (7-10). Research studies have shown that BRCC36 is overexpressed in a high percentage of breast tumors, which may contribute to resistance of breast cancer cells to ionizing radiation-induced apoptosis (4). BRCC36 also functions in the cytoplasm as part of a distinct complex known as the BRCC36-containing isopeptide complex (BRISC) (5,6). Indeed, research studies have shown that BRCC36 deubiquitinates and stabilizes IFNAR1 to modulate the cellular response to interferons (3).

**Background References**

1. Nijman, S.M. et al. (2005) *Cell* 123, 773-86.
2. Nalepa, G. et al. (2006) *Nat Rev Drug Discov* 5, 596-613.
3. Zheng, H. et al. (2013) *Cell Rep* 5, 180-93.
4. Chen, X. et al. (2006) *Cancer Res* 66, 5039-46.
5. Feng, L. et al. (2010) *J Biol Chem* 285, 30982-8.
6. Patterson-Fortin, J. et al. (2010) *J Biol Chem* 285, 30971-81.
7. Shao, G. et al. (2009) *Proc Natl Acad Sci U S A* 106, 3166-71.
8. Wang, B. and Elledge, S.J. (2007) *Proc Natl Acad Sci U S A* 104, 20759-63.
9. Sobhian, B. et al. (2007) *Science* 316, 1198-202.
10. Wang, B. et al. (2009) *Genes Dev* 23, 729-39.

**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 **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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