

#18215 Store at -20°C

BRCC36 (D5E5H) Rabbit mAb**Cell Signaling**
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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:
WB, 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**WB:** Western Blotting **IP:** Immunoprecipitation**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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