

#12457 Store at -20°C

**BRE (D8Q1J) 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	45	Rabbit IgG	#Q9NXR7	9577

**Product Usage Information****Application**Western Blotting  
Immunoprecipitation**Dilution**1:1000  
1:50**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**

BRE (D8Q1J) Rabbit mAb recognizes endogenous levels of total BRE protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln150 of human BRE protein.

**Background**

The breast cancer susceptibility gene, BRCA1, codes for an E3 ubiquitin ligase that functions in the maintenance of genome stability through regulation of the DNA damage response and DNA repair. BRCA1 protein forms at least three distinct complexes (BRCA1 A, B, and C) with other DNA repair proteins, and these interactions are vital for regulation of BRCA1 function. The BRCA1 A complex includes Rap80, BRCC36, Abraxas, MERIT40/NBA1, and BRE/BRCC45 and functions in G2/M phase checkpoint control (reviewed in 1,2). MERIT40 and BRE maintain the stability of both the BRCA1 A complex and the cytoplasmic BRISC complex, which contains BRCC36 and ABRO1 but not BRCA1 (3). Researchers have shown that the expression level of BRE is related to patient survival in breast cancer (4), and it may predict a favorable outcome in acute myeloid leukemia (AML) (5,6). Studies have also shown that BRE is overexpressed in human hepatocellular carcinoma (7) and that overexpression of BRE can cause resistance to apoptotic signaling and promote tumor growth (7,8).

**Background References**

- Ohta, T. et al. (2011) *FEBS Lett* 585, 2836-44.
- Huen, M.S. et al. (2010) *Nat Rev Mol Cell Biol* 11, 138-48.
- Hu, X. et al. (2011) *J Biol Chem* 286, 11734-45.
- Noordermeer, S.M. et al. (2012) *Breast Cancer Res Treat* 135, 125-33.
- Noordermeer, S.M. et al. (2011) *Blood* 118, 5613-21.
- Balgobind, B.V. et al. (2010) *Leukemia* 24, 2048-55.
- Chan, B.C. et al. (2008) *Oncogene* 27, 1208-17.
- Chui, Y.L. et al. (2010) *Biochem Biophys Res Commun* 391, 1522-5.

**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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