Revision 3

#11983 Store at -20C

Phospho-BRIP1/FANCJ (Thr1133) Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H Mk	Endogenous	145	Rabbit	#Q9BX63	83990

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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

Phospho-BRIP1/FANCJ (Thr1133) Antibody recognizes endogenous levels of BRIP1/FANCJ protein only when phosphorylated at Thr1133. This antibody also cross-reacts with a protein of unknown origin at ~130 kDa.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr1133 of human BRIP1/FANCJ protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

BACH1, also known as BRIP1 and FANCJ, is a DNA helicase involved in repair of DNA cross-links and double strand breaks (1-3). Interaction between phosphorylated BACH1 and BRCA1 is required for DNA damage-induced checkpoint signaling (3,4). Originally identified as a breast cancer susceptibility gene (1), the BACH1 gene is mutated in Fanconi anemia (5), a recessive disorder characterized by multiple congenital abnormalities, progressive bone marrow failure, and high cancer risk/predisposition. Research investigators have concluded that BACH1 interactions with BRCA1 and the presence of BACH1 mutations in patients with early onset breast cancer indicate that BACH1 may act as a tumor suppressor (6). Phosphorylation of BACH1 at Thr1133 is thought to be involved in regulation of the replication checkpoint and is required for the interaction of BACH1 with TopBP1 (7).

Background References

1. Cantor, S.B. et al. (2001) *Cell* 105, 149-60.
2. Litman, R. et al. (2005) *Cancer Cell* 8, 255-65.
3. Peng, M. et al. (2006) *Oncogene* 25, 2245-53.
4. Shiozaki, E.N. et al. (2004) *Mol Cell* 14, 405-12.
5. Kennedy, R.D. and D'Andrea, A.D. (2005) *Genes Dev* 19, 2925-40.
6. Cantor, S.B. and Guillemette, S. (2011) *Future Oncol* 7, 253-61.
7. Gong, Z. et al. (2010) *Mol Cell* 37, 438-46.

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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