Revision 3

Store at -20C

#11983

# Phospho-BRIP1/FANCJ (Thr1133) Antibody

Cell Signaling TECHNOLOGY®

**Orders:** 877-616-CELL (2355) orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**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 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

**W:** Western Blotting **IP:** Immunoprecipitation

## Cross-Reactivity Key

**H:** Human **Mk:** Monkey

## Trademarks and Patents



## Limited Uses

force or effect.

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