Revision 1

#12110 Store at -20C

# Phospho-MERIT40 (Ser29) 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 | 40 | Rabbit | #Q9NWV8 | 29086 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |
| Immunoprecipitation | 1:50 |

## 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-MERIT40 (Ser29) Antibody recognizes endogenous levels of MERIT40 protein only when phosphorylated at Ser29.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser29 of human MERIT40 protein. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

The breast cancer susceptibility gene, BRCA1, codes for an E3 ubiquitin ligase that functions in the maintenance of genome stability through regulation of DNA damage response and DNA repair. BRCA1 forms at least three distinct complexes (BRCA1 A, B, and C) with other DNA repair proteins, and these interactions are vital for the regulation of BRCA1 function. The BRCA1-Rap80 complex (BRCA1 A complex), including Rap80, BRCC36, BRCC45, Abraxas, and MERIT40/NBA1, functions in G2/M phase checkpoint control (reviewed in 1,2).
MERIT40/NBA1 localizes to sites of DNA damage and is required for the appropriate localization of BRCA1 in response to ionizing radiation, as well as maintenance of the BRCA1 A complex (3,4). Proteomics studies have identified Ser29 as a phosphorylated site on MERIT40/NBA1, and the significance of this phosphorylation is under investigation (5-9).

## Background References

1. Ohta, T. et al. (2011) *FEBS Lett* 585, 2836-44.
2. Huen, M.S. et al. (2010) *Nat Rev Mol Cell Biol* 11, 138-48.
3. Wang, B. et al. (2009) *Genes Dev* 23, 729-39.
4. Shao, G. et al. (2009) *Genes Dev* 23, 740-54.
5. Moritz, A. et al. (2010) *Sci Signal* 3, ra64.
6. Rigbolt, K.T. et al. (2011) *Sci Signal* 4, rs3.
7. Iliuk, A.B. et al. (2010) *Mol Cell Proteomics* 9, 2162-72.
8. Wu, F. et al. (2010) *Mol Cell Proteomics* 9, 1616-32.
9. Mayya, V. et al. (2009) *Sci Signal* 2, ra46.

## 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 nonfat dry milk, 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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