

#4120 Store at -20°C

Microcephalin-1/BRIT1 (D38G5) Rabbit mAb

✓ 100 µl (10 western blots)



Orders ■ 877-616-CELL (2355) orders@cellsignaling.com
Support ■ 877-678-TECH (8324) info@cellsignaling.com
Web ■ www.cellsignaling.com

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R, Mk	100 kDa	Rabbit IgG**

Background: Microcephalin-1 (MCPH1)/BRIT1 is an early DNA damage response protein named for its mutated state in the human disease primary microcephaly. BRIT1 forms damage-induced nuclear foci, is involved in DNA damage and cell cycle checkpoints as well as regulation of mitosis. BRIT1 function is necessary for DNA damage responses, and the absence of BRIT1 function leads to genome instability. A potential tumor suppressor, BRIT1 expression is reduced in human carcinomas (1-2, reviewed in 3).

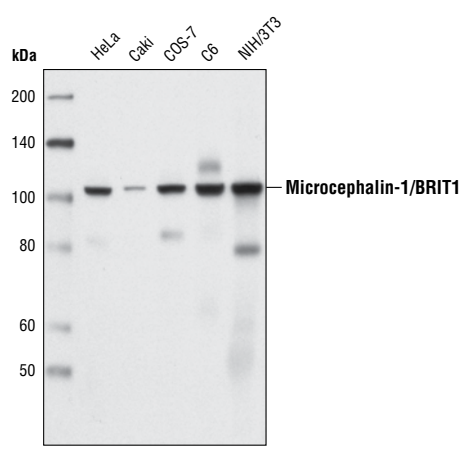
BRIT1 colocalizes with other DNA repair proteins (53BP1, MDC1, NBS1, ATM, RPA, and ATR) and is required for their activation (2). BRIT1 likely regulates DNA repair through chromatin remodeling in response to DNA damage, allowing access of repair proteins to DNA (4).

Specificity/Sensitivity: Microcephalin-1/BRIT1 (D38G5) Rabbit mAb detects endogenous levels of total Microcephalin-1/BRIT1 protein.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to central residues of human Microcephalin-1/BRIT1.

Background References:

- (1) Lin, S.Y. et al. (2005) *Proc Natl Acad Sci USA* 102, 15105-9.
- (2) Rai, R. et al. (2006) *Cancer Cell* 10, 145-57.
- (3) Chaplet, M. et al. (2006) *Cell Cycle* 5, 2579-83.
- (4) Peng, G. et al. (2009) *Nat Cell Biol* 11, 865-72.



Western blot analysis of extracts from various cell types using Microcephalin-1/BRIT1 (D38G5) Rabbit mAb.

Entrez-Gene ID #79648
Swiss-Prot Acc. #Q8NEMO

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.