Revision 1

Store at -20C

#9201

CtIP (D76F7) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H Mk	Endogenous	110	Rabbit IgG	#Q99708	5932

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

CtIP (D76F7) Rabbit mAb recognizes endogenous levels of total CtIP protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CtIP protein.

Background

DNA damage checkpoints are critical for regulated repair of damaged DNA and genome maintenance. CtIP/RBBP8 (CtBP-interacting protein), initially characterized as a binding partner for the trancription factor CtBP, has emerged as a regulator of both cell cycle progression and repair of DNA double strand breaks (DSB). Along with the DSB-sensing MRN complex (MRE11-RAD50-NBS1), CtIP functions in the generation of single stranded DNA at DSBs, a process required for signaling to DNA repair machinery (reviewed in 1). CtIP is thought to be critical in the transition between sensing of DSBs and repair by homologous recombination (HR) (2,3).

In addition to HR, DSBs can also be repaired through nonhomologous end joining (NHEJ), and CtIP has been shown to have a role in signaling to the NHEJ pathway independently of its function in DSB end resection (4).

CtIP is also involved in cellular tolerence of topoisomerase inhibitors camptothecin and etoposide, which are used to treat cancer through their ability to introduce DSBs in cycling cells (5).

Background References

1. You, Z. and Bailis, J.M. (2010) *Trends Cell Biol* 20, 402-9.
2. You, Z. et al. (2009) *Mol Cell* 36, 954-69.
3. Eid, W. et al. (2010) *EMBO Rep* 11, 962-8.
4. Quennet, V. et al. (2010) *Nucleic Acids Res*, Epub ahead of print.
5. Nakamura, K. et al. (2010) *PLoS Genet* 6, e1000828.

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

W: Western Blotting

Cross-Reactivity Key

H: Human **Mk:** Monkey

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Limited Uses

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