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Anti-CTIP (Phospho-S327) Antibody

Catalog # AP59933

Product Information

Application	WB
Primary Accession	Q99708
Reactivity	Human, Mouse, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	101942

Additional Information

Gene ID	5932
Other Names	CTIP; DNA endonuclease RBBP8; CtBP-interacting protein; CtIP; Retinoblastoma-binding protein 8; RBBP-8; Retinoblastoma-interacting protein and myosin-like; RIM; Sporulation in the absence of SPO11 protein 2 homolog; SAE2
Target/Specificity	KLH-conjugated synthetic phosphopeptide corresponding to residues surrounding S327 of human CTIP protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	RBBP8 (HGNC:9891)
Function	Endonuclease that cooperates with the MRE11-RAD50-NBN (MRN) complex in DNA-end resection, the first step of double-strand break (DSB) repair through the homologous recombination (HR) pathway (PubMed:17965729, PubMed:19202191, PubMed:19759395, PubMed:20064462, PubMed:23273981, PubMed:26721387, PubMed:27814491, PubMed:27889449, PubMed:30787182, PubMed:31802118). HR is restricted to S and G2 phases of the cell cycle and preferentially repairs DSBs resulting from replication fork collapse (PubMed:17965729, PubMed:19202191, PubMed:23273981, PubMed:27814491, PubMed:27889449, PubMed:30787182). Key determinant of DSB repair pathway choice, as it commits cells to HR by preventing classical non-homologous end-joining (NHEJ) (PubMed:19202191). Specifically promotes the endonuclease activity of the MRN complex to clear DNA ends containing protein adducts: recruited to

DSBs by NBN following phosphorylation by CDK1, and promotes the endonuclease activity of MRE11 to clear protein-DNA adducts and generate clean double-strand break ends (PubMed:27814491, PubMed:27889449, PubMed:30787182, PubMed:33836577). Functions downstream of the MRN complex and ATM, promotes ATR activation and its recruitment to DSBs in the S/G2 phase facilitating the generation of ssDNA (PubMed:16581787, PubMed:17965729, PubMed:19759395, PubMed:20064462). Component of the BRCA1-RBBP8 complex that regulates CHEK1 activation and controls cell cycle G2/M checkpoints on DNA damage (PubMed:15485915, PubMed:16818604). During immunoglobulin heavy chain class-switch recombination, promotes microhomology-mediated alternative end joining (A-NHEJ) and plays an essential role in chromosomal translocations (By similarity). Binds preferentially to DNA Y-junctions and to DNA substrates with blocked ends and promotes intermolecular DNA bridging (PubMed:30601117).

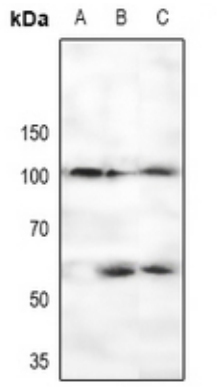
Cellular Location

Nucleus. Chromosome Note=Associates with sites of DNA damage in S/G2 phase (PubMed:10764811, PubMed:25349192). Recruited to DSBs by the MRE11- RAD50-NBN (MRN) complex following phosphorylation by CDK1, which promotes interaction with NBN (PubMed:27814491, PubMed:27889449, PubMed:33836577). Ubiquitinated RBBP8 binds to chromatin following DNA damage (PubMed:16818604).

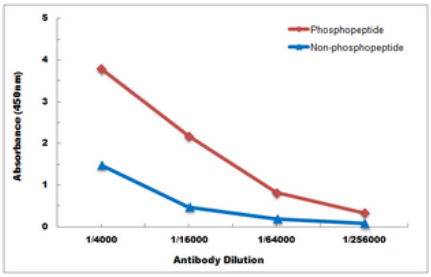
Tissue Location

Expressed in ER-positive breast cancer lines, but tends to be down-regulated ER-negative cells (at protein level)

Images



Western blot analysis of CTIP (Phospho-S327) expression in U87 (A), PC3 (B), MCF7 (C) whole cell lysates. (Predicted band size: 101 kD; Observed band size: 101 kD)



Direct ELISA antibody dose-response curve using Anti-CTIP (Phospho-S327) Antibody. Antigen (Phosphopeptide and non-phosphopeptide) concentration is 5 ug/ml. Goat Anti-Rabbit IgG (H&L) - HRP was used as the secondary antibody, and signal was developed by TMB substrate.

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