

#### **RBBP8 Antibody (C-term) Blocking peptide** Synthetic peptide

Catalog # BP14029b

# Specification

# **RBBP8** Antibody (C-term) Blocking peptide - Product Information

Primary Accession

<u>Q99708</u>

# **RBBP8** Antibody (C-term) Blocking peptide - Additional Information

Gene ID 5932

#### Other Names

DNA endonuclease RBBP8, 31--, 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, RBBP8, CTIP

## Target/Specificity

The synthetic peptide sequence used to generate the antibody AP14029b was selected from the C-term region of RBBP8. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

#### Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

## **RBBP8** Antibody (C-term) Blocking peptide - Protein Information

Name RBBP8

## Synonyms CTIP

## 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:<a href="http://www.uniprot.org/citations/17965729" target="\_blank">17965729</a>, PubMed:<a href="http://www.uniprot.org/citations/19202191" target="\_blank">17965729</a>, PubMed:<a href="http://www.uniprot.org/citations/19202191" target="\_blank">19202191</a>, PubMed:<a href="http://www.uniprot.org/citations/19759395" target="\_blank">19202191</a>, PubMed:<a href="http://www.uniprot.org/citations/19759395" target="\_blank">20064462</a>, PubMed:<a href="http://www.uniprot.org/citations/20064462" target="\_blank">20064462</a>, PubMed:<a href="http://www.uniprot.org/citations/20064462" target="\_blank">20064462</a>, PubMed:<a href="http://www.uniprot.org/citations/26721387" target="\_blank">20064462</a>, PubMed:<a href="http://www.uniprot.org/citations/26721387"</a>

target="\_blank">26721387</a>). HR is restricted to S and G2 phases of the cell cycle and preferentially repairs DSBs resulting from replication fork collapse (PubMed:<a



href="http://www.uniprot.org/citations/17965729" target=" blank">17965729</a>, PubMed:<a href="http://www.uniprot.org/citations/19202191" target=" blank">19202191</a>). Key determinant of DSB repair pathway choice, as it commits cells to HR by preventing classical non-homologous end-joining (NHEJ) (PubMed:<a href="http://www.uniprot.org/citations/19202191" target=" blank">19202191</a>). 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:<a href="http://www.uniprot.org/citations/16581787" target=" blank">16581787</a>, PubMed:<a href="http://www.uniprot.org/citations/17965729" target=" blank">17965729</a>, PubMed: <a href="http://www.uniprot.org/citations/19759395" target=" blank">19759395</a>, PubMed:<a href="http://www.uniprot.org/citations/20064462" target="\_blank">20064462</a>). Component of the BRCA1-RBBP8 complex that regulates CHEK1 activation and controls cell cycle G2/M checkpoints on DNA damage (PubMed:<a href="http://www.uniprot.org/citations/15485915" target=" blank">15485915</a>, PubMed:<a href="http://www.uniprot.org/citations/16818604" target=" blank">16818604</a>). 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:<a href="http://www.uniprot.org/citations/30601117" target=" blank">30601117</a>).

#### **Cellular Location**

Nucleus. Chromosome. Note=Associates with sites of DNA damage in S/G2 phase (PubMed:10764811, PubMed:25349192). 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)

# **RBBP8 Antibody (C-term) Blocking peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

## • <u>Blocking Peptides</u> RBBP8 Antibody (C-term) Blocking peptide - Images

## **RBBP8** Antibody (C-term) Blocking peptide - Background

The protein encoded by this gene is a ubiquitouslyexpressed nuclear protein. It is found among several proteins thatbind directly to retinoblastoma protein, which regulates cellproliferation. This protein complexes with transcriptionalco-repressor CTBP. It is also associated with BRCA1 and is thoughtto modulate the functions of BRCA1 in transcriptional regulation,DNA repair, and/or cell cycle checkpoint control. It is suggested that this gene may itself be a tumor suppressor acting in the samepathway as BRCA1. Three transcript variants encoding two differentisoforms have been found for this gene. More transcript variantsexist, but their full-length natures have not been determined.

## **RBBP8 Antibody (C-term) Blocking peptide - References**

Kaidi, A., et al. Science 329(5997):1348-1353(2010)Thye, T., et al. Nat. Genet. 42(9):739-741(2010)Notaridou, M., et al. Int. J. Cancer (2010) In press :Yasuno, K., et al. Nat. Genet. 42(5):420-425(2010)Zhao, J., et al. BMC Med. Genet. 11, 96 (2010) :