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Rabbit Anti-CtIP antibody

SL6137R

Product Name:	CtIP
Chinese Name:	视网膜母细胞瘤Binding protein8抗体
Alias:	COM1_HUMAN antibody CtBP interacting protein antibody CtBP-interacting protein antibody CtIP antibody DNA endonuclease RBBP8; RBBBP8; RBBP-8; RBBP8; Retinoblastoma-binding protein 8; Retinoblastoma-interacting protein and myosin-like; RIM; SAE2; Sporulation in the absence of SPO11 protein 2 homolog.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Pig,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	102kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human CtIP/RBBP8:621-720/897
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The protein encoded by this gene is a ubiquitously expressed nuclear protein. It is found among several proteins that bind directly to retinoblastoma protein, which regulates cell proliferation. This protein complexes with transcriptional co-repressor CTBP. It is also associated with BRCA1 and is thought to 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 same pathway as BRCA1. Three transcript variants encoding two different isoforms have been found for this gene. More transcript variants exist, but their full-length natures have not been determined. **Function:** Endonuclease that cooperates with the MRE11-RAD50-NBN (MRN) complex in processing meiotic and mitotic double-strand breaks (DSBs) by ensuring both resection and intrachromosomal association of the broken ends. 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. Component of the BRCA1-RBBP8 complex that regulates CHEK1 activation and controls cell cycle G2/M checkpoints on DNA damage. Promotes microhomology-mediated alternative end joining (A-NHEJ) during class-switch recombination and plays an essential role in chromosomal translocations. **Subunit:** Homodimer; dimerizes via the coiled coil domain. Interacts (via the PXDLS motif) with CTBP1; the interaction is disrupted via binding of the adenovirus E1A to CTBP1. Component of the BRCA1-RBBBP8 complex. Interacts (the Ser-327 phosphorylated form) with BRCA1 (via the C-terminal BRCA1 domains): the interaction occurs in the G2 phase, ubiquitinates RBBP8 and involves RBBP8 in BRCA1-dependent G2/M checkpoint control on DNA damage. Interacts with RB1. Interacts with the MRN complex. Interacts directly with MRE11A; the interaction is required for efficient homologous recombination (HR) and regulation of the MRN complex. Interacts directly with RAD50. Interacts directly with NBN. Interacts with SIRT6; the interaction deacetylates RBBP8 upon DNA damage. Interacts with LM04 (via the LIM zinc-binding 1 domain). **Subcellular Location:** Nucleus. Note=Associates with sites of DNA damage in S/G2 phase. Ubiquitinated RBBP8 binds to chromatin following DNA damage. **Post-translational modifications:** Acetylated. Deacetylation by SIRT6 upon DNA damage promotes DNA end resection. Phosphorylated upon DNA damage, probably by ATM or ATR. Hyperphosphorylation upon ionizing radiation results in dissociation from BRCA1. Phosphorylation at Thr-847 by CDK1 is essential for the recruitment to DNA and the DNA repair function. Phosphorylated on Ser-327 as cells enter G2 phase. This phosphorylation is required for binding BRCA1 and for the G2/M DNA damage transition checkpoint control. Ubiquitinated. Ubiquitination at multiple sites by BRCA1 (via its N-terminal RING domain) does not lead to its proteosomal degradation but instead the ubiquitinated RBBP8 binds to chromatin following DNA damage and may play a role in G2/M checkpoint control.

DISEASE:
Defects in RBBP8 are a cause of Seckel syndrome type 2 (SCKL2) [MIM:606744]. SCKL2 is a rare autosomal recessive disorder characterized by proportionate dwarfism of prenatal onset associated with low birth weight, growth retardation, severe microcephaly with a bird-headed like appearance, and mental retardation.
Defects in RBBP8 are a cause of Jawad disease (JWDS) [MIM:251255]. JWDS is a syndrome characterized by congenital microcephaly, moderately severe mental retardation, and symmetrical digital anomalies. Digital malformations of variable degree inclued hallux valgus, syndactyly of toes 4 and 5, short fifth fingers, single flexion crease of fifth fingers, polydactyly and synpolydactyly.
Note=Genetic variability in RBBP8 is noted as a factor in BRCA1-associated breast cancer risk. Exhibits sensitivity to tamoxifen in certain breast cancer cell lines.

Similarity:
Belongs to the COM1/SAE2/CtIP family.

SWISS:
Q99708

Gene ID:
5932

Database links:

Entrez Gene: 5932Human

Entrez Gene: 225182Mouse

Entrez Gene: 291787Rat

Omim: 604124Human

SwissProt: Q99708Human

SwissProt: Q80YR6Mouse

SwissProt: B1WC58Rat

Unigene: 546282Human

Unigene: 154275Mouse

Unigene: 128724Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.