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DMC1 Rabbit pAb

Catalog # AP96737

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q14565
Other Accession	Q14565
Predicted	Rat, Pig, Human, Mouse, Chicken, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	37681
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DMC1
Epitope Specificity	251-340/340
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the RecA family. DMC1 subfamily. Contains 1 HhH domain.
SUBUNIT	Interacts with the MND1-PSMC3IP heterodimer (By similarity). Double stacked ring-shaped homooctamer. Interacts with BRCA2.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	DNA repair proteins are necessary for the maintenance of chromosome integrity and are involved in the elimination of premutagenic lesions from DNA. The DNA repair proteins Rad51 and Rad52 are key components of the double-strand-break repair (DSBR) pathway. Rad51 is essential for mitotic and meiotic recombination, and its mutation in yeast and mammalian cells results in chromosome loss. Overexpression of Rad52 confers resistance to ionizing radiation and induces homologous intrachromosomal recombination. Rad52 is thought to be involved in an early stage of Rad51-mediated recombination. Additional proteins involved in the pathway include Nibrin and Dmc1. Nibrin, which complexes with Mre11 and Rad50, is absent in Nijemegen breakage syndrome (NBS) patients. Dmc1 is specifically involved in meiotic recombination. An alternative spliced form of Dmc1, designated Dmc1-D, is deleted for a region between the two motifs involved in nucleotide binding. The alternatively spliced Dmc1-D transcript is detected in both male and female germ cells, indicating that the encoded protein may have a role in mammalian genetic recombination in meiosis.

Additional Information

Gene ID	11144
Other Names	DCM1; DMC1H; LIM15; dJ199H16.1; Mei11; sgdp; DMC1_HUMAN; DMC1; DMC1_MOUSE; DNA meiotic recombinase 1; DMC1 (dosage suppressor of mck1, yeast homolog) meiosis-specific homologous recombination; DMC1 dosage suppressor of mck1 homolog, meiosis-specific homologous

	recombination (yeast)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

Protein Information

Name	DMC1 {ECO:0000303|PubMed:8602360, ECO:0000312|HGNC:HGNC:2927}
Function	Homologous DNA recombinase that catalyzes strand exchange during meiotic recombination (PubMed:15164066, PubMed:21307306, PubMed:26976601). Specifically required for meiotic recombination, facilitating the search and repair of DNA using the homolog rather than the sister chromatid, and can tolerate mismatches in heteroduplex DNA, unlike the higher-fidelity RAD51 (PubMed:15164066, PubMed:26976601).
Cellular Location	Chromosome. Nucleus. Note=Binds single-stranded DNA (ssDNA) near the break site. {ECO:0000250|UniProtKB:Q61880}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.