10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RAD21 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2226a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	O60216
Reactivity	Human, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	1B6D1
Isotype	IgG1
Calculated MW	71690
Description	The protein encoded by this gene is highly similar to the gene product of Schizosaccharomyces pombe rad21, a gene involved in the repair of DNA double-strand breaks, as well as in chromatid cohesion during mitosis. This protein is a nuclear phospho-protein, which becomes hyperphosphorylated in cell cycle M phase. The highly regulated association of this protein with mitotic chromatin specifically at the centromere region suggests its role in sister chromatid cohesion in mitotic cells.
Immunogen	Purified recombinant fragment of human RAD21 (AA: 287-403) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	5885
Other Names	Double-strand-break repair protein rad21 homolog, hHR21, Nuclear matrix protein 1, NXP-1, SCC1 homolog, RAD21, HR21, KIAA0078, NXP1
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RAD21 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAD21

Function	[Double-strand-break repair protein rad21 homolog]: As a member of the cohesin complex, involved in sister chromatid cohesion from the time of DNA replication in S phase to their segregation in mitosis, a function that is essential for proper chromosome segregation, post-replicative DNA repair, and the prevention of inappropriate recombination between repetitive regions (PubMed:11509732). The cohesin complex may also play a role in spindle pole assembly during mitosis (PubMed:11590136). In interphase, cohesins may function in the control of gene expression by binding to numerous sites within the genome (By similarity). May control RUNX1 gene expression (Probable). Binds to and represses APOB gene promoter (PubMed:25575569). May play a role in embryonic gut development, possibly through the regulation of enteric neuron development (By similarity).
Cellular Location	[Double-strand-break repair protein rad21 homolog]: Nucleus. Nucleus matrix Chromosome Chromosome, centromere. Cytoplasm, cytoskeleton, spindle pole. Note=Associates with chromatin (PubMed:11073952, PubMed:11590136). Before prophase, scattered along chromosome arms (PubMed:11073952). During prophase and prometaphase, most cohesins dissociate from the arms of condensing chromosome, possibly through PLK1-mediated phosphorylation (PubMed:11931760). A small amount of cohesin remains in centromeric regions and is removed from chromosomes only at the onset of anaphase. At anaphase, cleavage by separase/ESPL1 leads to the dissociation of cohesin from chromosomes and chromosome separation (PubMed:11073952, PubMed:11509732)
Tissue Location	Expressed in the gut (at protein level).

References

1.Breast Cancer Res. 2012 Apr 26;14(2):R69.2.Breast Cancer Res. 2011 Jan 21;13(1):R9.

Images