

**RAD21 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO2226a****Specification****RAD21 Antibody - Product Information**

Application	<b>E, WB, IF, FC, IHC</b>
Primary Accession	<a href="#">O60216</a>
Reactivity	<b>Human, Rat, Monkey</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>71.7kDa KDa</b>

**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

**RAD21 Antibody - 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**

E~~1/10000  
WB~~1/500 - 1/2000  
IF~~1/200 - 1/1000  
FC~~1/200 - 1/400  
IHC~~1/200 - 1/1000

**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.

## RAD21 Antibody - 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:<a href="http://www.uniprot.org/citations/11509732" target="\_blank">11509732</a>). The cohesin complex may also play a role in spindle pole assembly during mitosis (PubMed:<a href="http://www.uniprot.org/citations/11590136" target="\_blank">11590136</a>). 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:<a href="http://www.uniprot.org/citations/25575569" target="\_blank">25575569</a>). 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).

## RAD21 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)