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KD-Validated Anti-RAD21 Cohesin Complex Component Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1678

Specification

KD-Validated Anti-RAD21 Cohesin Complex Component Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	O60216
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 72 kDa , observed, 130 kDa KDa**
Gene Name	**RAD21**
Aliases	**RAD21; RAD21 Cohesin Complex Component; HHR21; SCC1; KIAA0078; Double-Strand-Break Repair Protein Rad21 Homolog; Sister Chromatid Cohesion 1; Nuclear Matrix Protein 1; SCC1 Homolog; Kleisin; NXP-1; HR21; NXP1; Protein Involved In DNA Double-Strand Break Repair; RAD21 (S. Pombe) Homolog; RAD21 Homolog (S. Pombe); RAD21 Homolog; HRAD21; CDLS4; MCD1; MGS**
Immunogen	**A synthesized peptide derived from human RAD21**

KD-Validated Anti-RAD21 Cohesin Complex Component Rabbit Monoclonal Antibody - Additional Information

Gene ID	**5885**

Other Names
Double-strand-break repair protein rad21 homolog, hHR21, Nuclear matrix protein 1, NXP-1, SCC1 homolog, 64-kDa C-terminal product, 64-kDa carboxy-terminal product, 65-kDa carboxy-terminal product, RAD21

KD-Validated Anti-RAD21 Cohesin Complex Component Rabbit Monoclonal 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). 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)

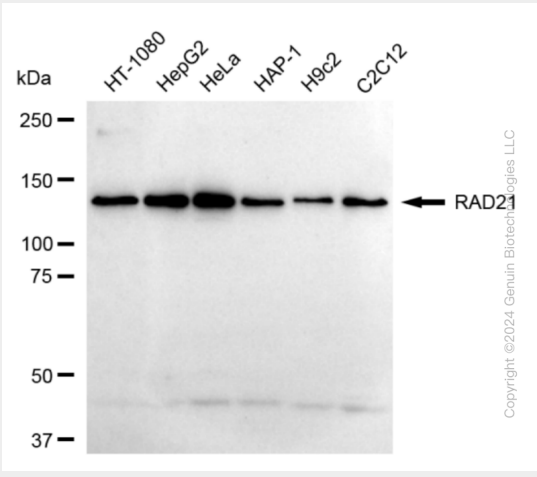
Tissue Location
Expressed in the gut (at protein level).

KD-Validated Anti-RAD21 Cohesin Complex Component Rabbit Monoclonal 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 Cytomety
- Cell Culture

KD-Validated Anti-RAD21 Cohesin Complex Component Rabbit Monoclonal Antibody - Images



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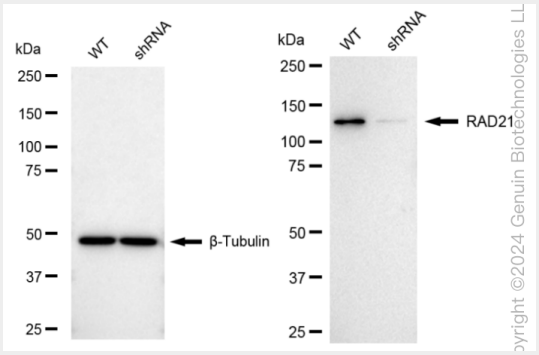
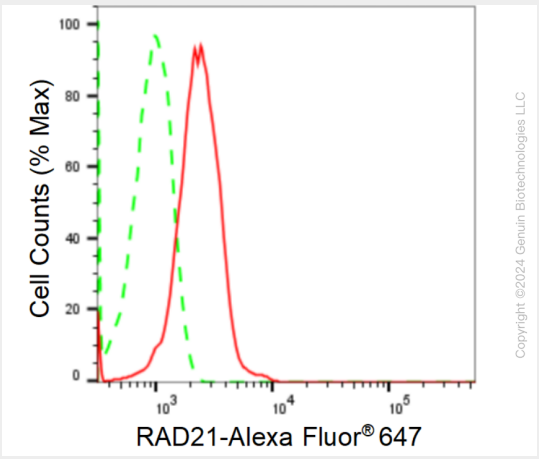
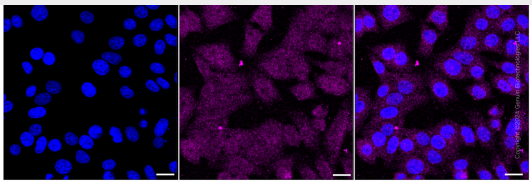
Western blotting analysis using anti-RAD21 antibody (Cat#AGI1678). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-RAD21 antibody (Cat#AGI1678, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-RAD21 antibody (Cat#AGI1678). RAD21 expression in wild type (WT) and RAD21 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-RAD21 antibody (Cat#AGI1678, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of RAD21 expression in HepG2 cells using anti-RAD21 antibody (Cat#AGI1678, 1:2,000). Green, isotype control; red, RAD21.



Immunocytochemical staining of HepG2 cells with anti-RAD21 antibody (Cat#AGI1678, 1:1,000). Nuclei were stained blue with DAPI; RAD21 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.