

[KD Validated] Anti-RAD21 Rabbit mAb

Purified Recombinant Rabbit Monoclonal Antibody

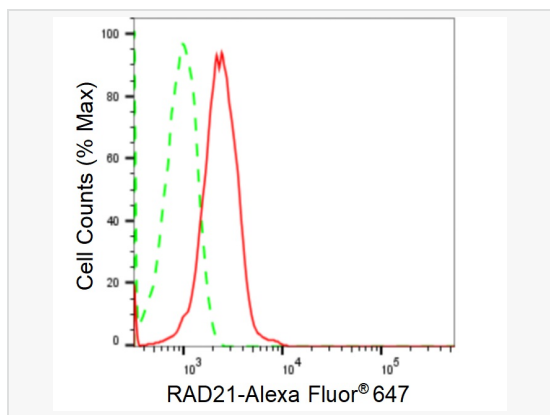
Catalog # R020996

Product Information

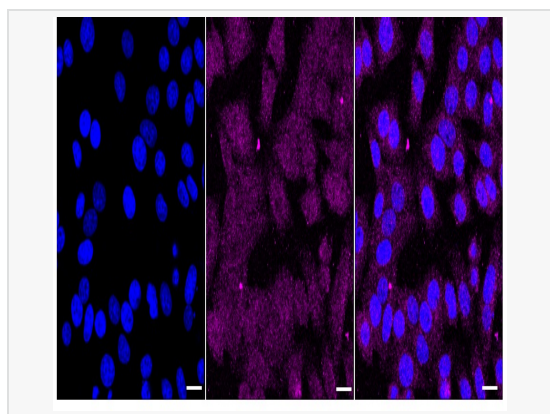
Application	WB, FC, IF (Cell)/ICC
Reactivity	Human, Mouse, Rat
Dilution	WB 1:1,000~1:5,000; FC 1:200~1:2,000; IF 1:100~1:1,000
Host	Rabbit
Clonality	Monoclonal
Clone No.	65A44S90
Isotype	IgG
Label	Unconjugated
Immunogen	A synthesized peptide derived from human RAD21
Format	Affinity purified monoclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 12 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	[KD Validated] Anti-RAD21 Rabbit mAb [65A44S90] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

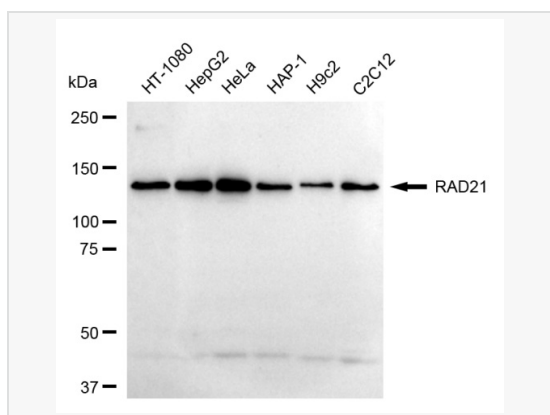
Synonyms	RAD21; RAD21 Cohesin Complex Component; HHR21; SCC1; KIAA0078; Double-Strand-Break Repair Protein Rad21 Homolog; Sister Chromatid Cohesion 1; Nuclear Matrix Protein 1; SCC1 Homolog; Kleisin; NXP-1; HR21; NXP1; Protein Involved In DNA Double-Strand Break Repair; RAD21 (S. Pombe) Homolog; RAD21 Homolog (S. Pombe);RAD21 Homolog; HRAD21; CDLS4; MCD1; MGS.
Calculated MW	Calculated MW: 72 kDa, Observed MW: 130 kDa
Uniprot ID	O60216
Gene ID	5885
Background	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. [provided by RefSeq, Jul 2008]
Cellular Location	Nucleus. Chromosome. Chromosome, centromere. Note=Associates with chromatin. Before prophase it is scattered along chromosome arms. During prophase, most of cohesin complexes dissociate from chromatin probably because of phosphorylation by PLK, except at centromeres, where cohesin complexes remain. At anaphase, it is cleaved by separase/ESPL1, leading to the dissociation of the complex from chromosomes, allowing chromosome separation. Once cleaved by caspase-3, the C-terminal 64 kDa cleavage product translocates to the cytoplasm, where it may trigger apoptosis.



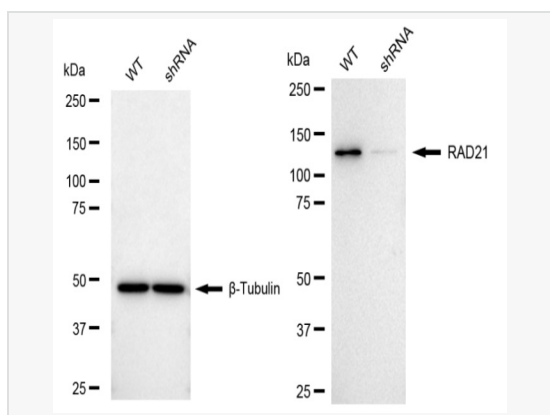
Flow cytometric analysis of RAD21 expression in HepG2 cells using RAD21 antibody (R020996, 1:2,000). Green, isotype control; red, RAD21.



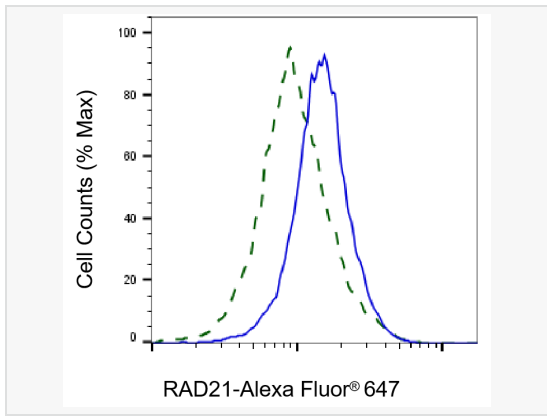
Immunocytochemical staining of HepG2 cells with RAD21 antibody (R020996, 1:1,000). Nuclei were stained blue with DAPI; RAD21 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.



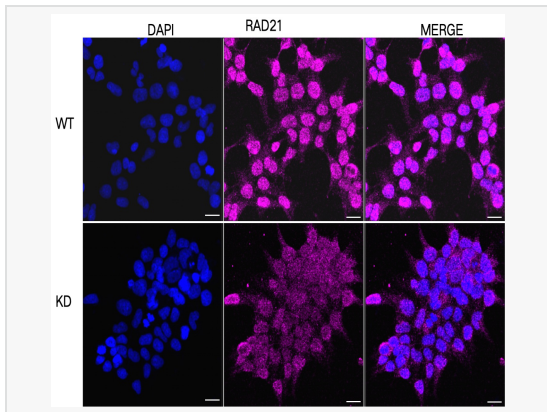
Western blotting analysis using RAD21 antibody (R020996). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with RAD21 antibody (R020996, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.



Western blotting analysis using RAD21 antibody (R020996). 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 RAD21 antibody (R020996, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.



Validation of RAD21 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with RAD21 antibody (R020996, 1:2,000) and analyzed using BD flow cytometer.



Immunocytochemical staining of HeLa cells using RAD21 antibody (R020996, 1:1,000), Top panel: wild-type (WT); Bottom panel: RAD21 shRNA knockdown (KD). Nuclei were stained blue with DAPI; RAD21 was stained magenta with Alexa Fluor[®] 647. Scale bar, 20 μ m.