

Rabbit anti-Human rad21 Polyclonal Antibody | anti-rad21 antibody

rad21 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA327190	Rabbit	Human	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

rad21; Polyclonal Antibody; rad21 Antibody; CDLS4; Double-strand-break repair protein rad21 homolog; hHR21; HR21; HRAD21; KIAA0078; MCD1; Nuclear matrix protein 1; NXP-1; NXP1; Protein involved in DNA double-strand break repair; RAD21; RAD21 homolog (S. pombe); RAD21 homolog; RAD21_HUMAN; Scc1; SCC1 homolog; anti-rad21 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	IgG
Specificity	rad21 antibody detects endogenous levels of total rad21
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	631
Applicable Applications for anti-rad21 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human rad21
Subcellular Location	Nucleus. Chromosome. Chromosome > Centromere. 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.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (92%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

AAA327190 staining Hela cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.



WB (Western Blot)

Western blot analysis of rad21 using COLO205 whole cell lysates



IHC (Immunohistochemistry)

AAA327190 at 1/100 staining Human kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-rad21 antibody

Function: Cleavable component of the cohesin complex, involved in chromosome cohesion during cell cycle, in DNA repair, and in apoptosis. The cohesin complex is required for the cohesion of sister chromatids after DNA replication. The cohesin complex apparently forms a large proteinaceous ring within which sister chromatids can be trapped. At metaphase-anaphase transition, this protein is cleaved by separase/ESPL1 and dissociates from chromatin, allowing sister chromatids to segregate. The cohesin complex may also play a role in spindle pole assembly during mitosis. Also plays a role in apoptosis, via its cleavage by caspase-3/CASP3 or caspase-7/CASP7 during early steps of apoptosis: the C-terminal 64 kDa cleavage product may act as a nuclear signal to initiate cytoplasmic events involved in the apoptotic pathway.

Subunit Structure: Cohesin complexes are composed of the SMC1 (SMC1A or SMC1B) and SMC3 heterodimer attached via their hinge domain, RAD21 which link them, and one STAG protein (STAG1, STAG2 or STAG3), which interacts with RAD21 (PubMed:11590136). Found in a complex with SMC1A, SMC3, CDCA5, PDS5A/SCC-112 and PDS5B/APRIN (PubMed:15837422). Interacts with PDS5B and WAPL; the interaction is direct (PubMed:19696148). Interacts with SMC1A and SMC3 (By similarity). Interacts with DDX11 (PubMed:17105772). Found in a cohesin complex with SMC1A, SMC3 and STAG1 (PubMed:22628566).

Post-translational Modifications: Cleaved by separase/ESPL1 at the onset of anaphase. Cleaved by caspase-3 and caspase-7 at the beginning of apoptosis. The cleavage by ESPL1 and caspase-3 take place at different sites. Phosphorylated; becomes hyperphosphorylated in M phase of cell cycle. The large dissociation of cohesin from chromosome arms during prophase may be partly due to its phosphorylation by PLK.

Similarity: The C-terminal part associates with the head of SMC1A, while the N-terminal part binds to the head of SMC3. Belongs to the rad21 family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	5453994
NCBI GeneID	5885
NCBI Accession #	NP_006256.1
NCBI GenBank Nucleotide #	NM_006265.2
UniProt Accession #	O60216; Q15001; Q99568; A8K0E0
Molecular Weight	Observed: 130 kD Predicted: 72 kDa
NCBI Official Full Name	double-strand-break repair protein rad21 homolog
NCBI Official Synonym Full Names	RAD21 cohesin complex component

NCBI Official Symbol	RAD21
NCBI Official Synonym Symbols	MGS; HR21; MCD1; NXP1; SCC1; CDLS4; hHR21; HRAD21
NCBI Protein Information	double-strand-break repair protein rad21 homolog
UniProt Protein Name	Double-strand-break repair protein rad21 homolog
UniProt Gene Name	RAD21
UniProt Synonym Gene Names	HR21; KIAA0078; NXP1; SCC1; hHR21; NXP-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/rad21-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/327190>