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RAD21 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50599

Specification

RAD21 Antibody - Product Information

Application	**WB**
Primary Accession	O60216
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**72,(actual)130 KDa**
Antigen Region	**541-570**

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
WB~~ 1:1000

Format
Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.

Storage Conditions
-20℃

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: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)

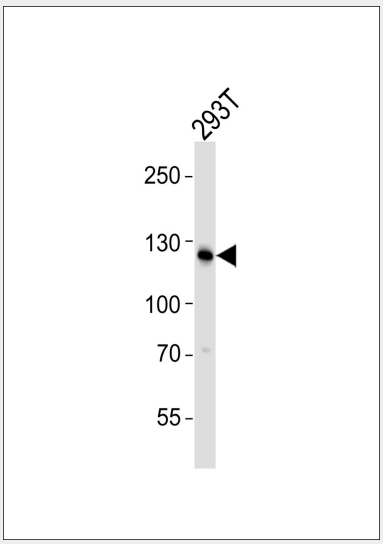
Tissue Location
Expressed in the gut (at protein level).

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 Cytomety
- Cell Culture

RAD21 Antibody - Images



Western blot analysis of lysate from 293T cell line,using RAD21 Antibody(AP50599). AP50599 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysate at 35ug.

RAD21 Antibody - Background

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.

RAD21 Antibody - References

McKay M.J.,et al.Genomics 36:305-315(1996).
Sadano H.,et al.Biochem. Biophys. Res. Commun. 267:418-422(2000).
Nomura N.,et al.DNA Res. 1:223-229(1994).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.