

RAD21 Rabbit monoclonal antibody

Catalog: MB66451

Host: Rabbit

Reactivity: Human, Hamster

Background:

The cohesin complex consists of a heterodimer between SMC1 (SMC1A or B) and SMC3, bound by additional RAD21 and STAG proteins (STAG1, 2, or 3). These proteins form a ring-like structure that mediates the cohesion of two sister chromatids after DNA replication in S phase. RAD21 and STAG2 are phosphorylated by Polo-like kinase (PLK) during prophase, which leads to the dissociation of cohesin complexes from the chromosome arms; however, cohesin remains bound to centromeres until anaphase. RAD21 is cleaved by separin/ESPL1 in anaphase, which leads to dissociation of the remaining cohesin from centromeres, enabling sister chromatids to segregate during mitosis. RAD21 is also cleaved by caspase-3 and caspase-7 during apoptosis, resulting in a 64 kDa carboxy-terminal cleavage product that translocates to the cytoplasm and may help to trigger apoptosis. In addition to mediating cohesion of sister chromatids, the cohesin complex plays important roles in gene regulation and DNA repair, as SMC1 and SMC3 are both phosphorylated by ATM and ATR kinases upon DNA damage.

Product:

Liquid in 50mM Tris-Glycine (pH 7.4), 0.15M NaCl, 50% Glycerol, 0.01% Sodium azide and 0.05% BSA.

Molecular Weight:

~ 110 kDa

Swiss-Prot:

O60216

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/100), IF/ICC (1/50 - 1/100)

Storage&Stability:

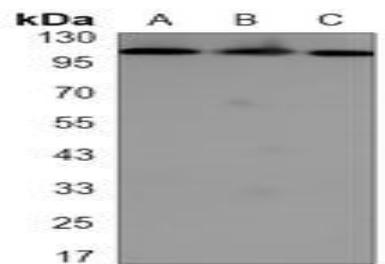
Store at 4 °C short term. Aliquot and store at -20 °C long

term. Avoid freeze-thaw cycles.

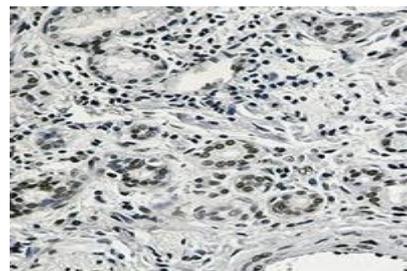
Specificity:

Recognizes endogenous levels of RAD21 protein.

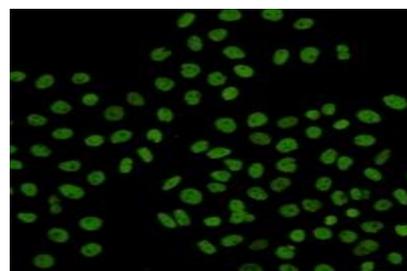
DATA:



Western blot analysis of RAD21 expression in HeLa (A), CHOK1 (B), Ramos (C) whole cell lysates.



Immunohistochemical analysis of RAD21 staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.97). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of RAD21 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for

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PRODUCT DATA SHEET

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5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

Note:

For research use only, not for use in diagnostic procedure.

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