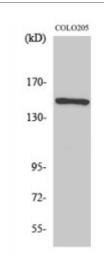


## Anti-Rad50 antibody



Description

Rabbit polyclonal to Rad50.

Model STJ95328

**Host** Rabbit

**Reactivity** Human, Mouse, Rat

**Applications** ELISA, IHC, WB

Immunogen Synthesized peptide derived from human Rad50

**Immunogen Region** 650-730 aa, Internal

**Gene ID** <u>10111</u>

Gene Symbol RAD50

**Dilution range** WB 1:500-1:2000IHC 1:100-1:300ELISA 1:20000

**Specificity** Rad50 Polyclonal Antibody detects endogenous levels of Rad50 protein.

**Tissue Specificity** Expressed at very low level in most tissues, except in testis where it is

expressed at higher level. Expressed in fibroblasts.

**Purification** The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

**Note** For Research Use Only (RUO).

**Protein Name** DNA repair protein RAD50 hRAD50

Molecular Weight 153 kDa

**Clonality** Polyclonal

**Conjugation** Unconjugated

**Isotype** IgG

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

**Concentration** 1 mg/ml

**Storage Instruction** Store at -20°C, and avoid repeat freeze-thaw cycles.

Database Links <u>HGNC:9816OMIM:604040</u>

Alternative Names DNA repair protein RAD50 hRAD50

**Function** Component of the MRN complex, which plays a central role in double-strand

break (DSB) repair, DNA recombination, maintenance of telomere integrity and meiosis. The complex possesses single-strand endonuclease activity and double-strand-specific 3'-5' exonuclease activity, which are provided by MRE11. RAD50 may be required to bind DNA ends and hold them in close proximity. This could facilitate searches for short or long regions of sequence homology in the recombining DNA templates, and may also stimulate the activity of DNA ligases and/or restrict the nuclease activity of MRE11 to prevent nucleolytic degradation past a given point . The complex may also be required for DNA damage signaling via activation of the ATM kinase . In

telomeres the MRN complex may modulate t-loop formation.

Sequence and Domain Family The zinc-hook, which separates the large intramolecular coiled coil regions,

contains 2 Cys residues that coordinate one molecule of zinc with the help of the 2 Cys residues of the zinc-hook of another RAD50 molecule, thereby forming a V-shaped homodimer. The two heads of the homodimer, which constitute the ATP-binding domain, interact with the MRE11 homodimer .

Cellular Localization Nucleus Chromosome, telomere. Localizes to discrete nuclear foci after

treatment with genotoxic agents.

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