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Product datasheet for TA336262

RAD50 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, IF, IP, Simple Western, WB
Recommended Dilution:	ICC/IF (Negative), Immunocytochemistry/ Immunofluorescence, Immunoprecipitation: 1:10-1:500, Western Blot: 1:2000, Simple Western: 1:2000
Reactivity:	Human, Mouse, Hamster
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	C-terminal mouse RAD50 (604 amino acids). [UniProt# P70388]
Formulation:	Store at 4C. Do not freeze.
Concentration:	lot specific
Purification:	Whole antisera
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	153 kDa
Gene Name:	RAD50 double strand break repair protein
Database Link:	NP_005723 Entrez Gene 19360 MouseEntrez Gene 10111 Human Q92878

View online »

Background: RAD50 (DNA repair protein RAD50) is a component of MRN complex (Mre11-Rad50-Nbs1) that plays an important role in detection and signaling of DNA double strand breaks (DSBs) through acting as DSB sensor, co-activator of DSB-induced cell cycle checkpoint signaling, and as repair-effector in two competing DSB repair pathways: homologous recombination (HR) and non-homologous end-joining (NHEJ). MRN complex also associates with telomeres at the ends of linear chromosomes, where it contributes to their maintenance. RAD50 is required to bind DNA ends for holding them in close proximity where it facilitates searches for short or long regions of sequence homology in the recombining DNA templates, and also stimulate the activity of DNA ligases and/or restrict MRE11A's nuclease activity to prevent nucleolytic degradation. DSBs can be caused by ionizing radiation, certain chemotherapy drugs, metabolic ROS, as errors during replication, by programmed enzymatic activities during meiosis/V(D)J recombination etc., and if left unrepaired, DSBs can generate chromosomal translocations, aneuploidy and carcinogenesis. Defects in RAD50 have been linked to Nijmegen breakage syndrome-like disorder (NBSLD).

Synonyms: hRad50; NBSLD; RAD502

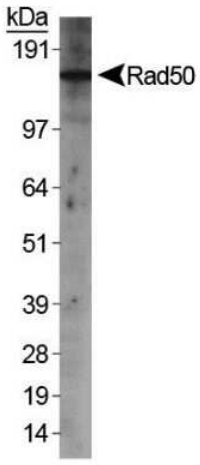
Note: This RAD50 antibody is useful for Immunoprecipitation and Western blot, where a band can be seen at 153 kDa. IP has been done with 3-4 X 10(6) cells. ICC/IF does not appear to work. Immunocytochemistry/Immunofluorescence was reported in scientific literature.

Protein Families: Druggable Genome

Protein Pathways: Homologous recombination, Non-homologous end-joining

Product images:

Simple Western: Rad50 Antibody TA336262 - Simple Western lane view shows a specific band for Rad50 in 0.5 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Western Blot: Rad50 Antibody TA336262 - Detection of Rad50 in HeLa nuclear extracts.