

Product Name: KD-Validated RAD51 Recombinant Rabbit Monoclonal Antibody
Catalog #: KVA01729

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 37.0kDa

Antigen Information

Gene Name	RAD51
Alternative Names	RAD51; RAD51 Recombinase; RAD51A; BRCC5; FANCR; RECA; BRCA1/BRCA2-Containing Complex, Subunit 5; DNA Repair Protein RAD51 Homolog 1; RAD51 Homolog A; HsT16930; HsRad51; HRAD51; RAD51 Homolog (RecA Homolog, E. Coli) (S. Cerevisiae); RAD51 (S. Cerevisiae) Homolog (E Coli RecA Homolog); RAD51 Homolog (S. Cerevisiae); RecA, E. Coli, Homolog Of; Recombination Protein A; RecA-Like Protein; HST16930; HSRAD51; HsRAD51; MRMV2
Gene ID	5888.0
SwissProt ID	Q06609
Immunogen	A synthesized peptide derived from human Rad51

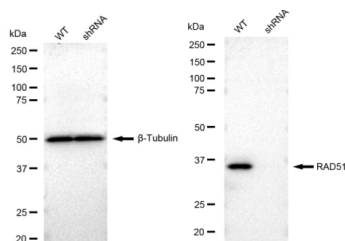
Background

The protein encoded by this gene is a member of the RAD51 protein family. RAD51 family members are highly similar to bacterial RecA and *Saccharomyces cerevisiae* Rad51, and are known to be involved in the homologous recombination and repair of DNA. This protein can interact with the ssDNA-binding protein RPA and RAD52, and it is thought to play roles in homologous pairing and strand transfer of DNA. This protein is also found to interact with BRCA1 and BRCA2, which may be important for the cellular response to DNA damage. BRCA2 is shown to regulate both the intracellular localization and DNA-binding ability of this protein. Loss of these controls following BRCA2 inactivation may be a key event leading to genomic instability and tumorigenesis. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2009]

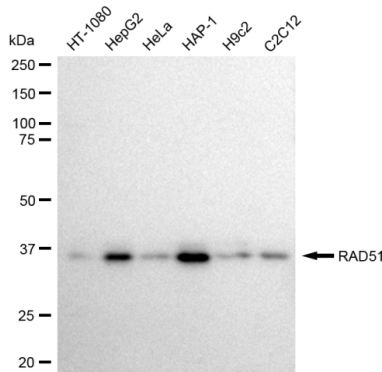
Research Area

Epigenetics and Nuclear Signaling

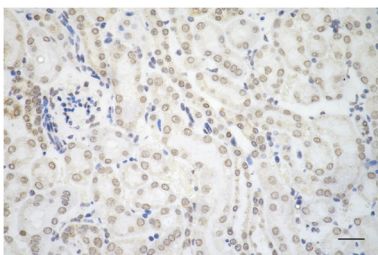
Image Data



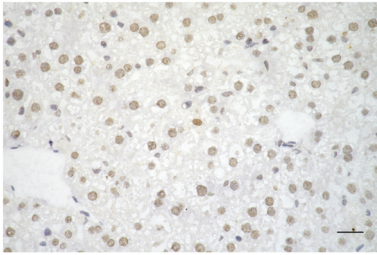
Western blotting analysis using RAD51 antibody (KVA01729). RAD51 expression in wild type (WT) and RAD51 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with RAD51 antibody (KVA01729, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



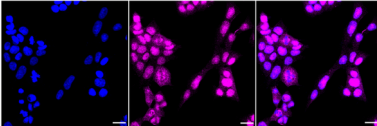
Western blotting analysis using RAD51 antibody (KVA01729). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with RAD51 antibody (KVA01729, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



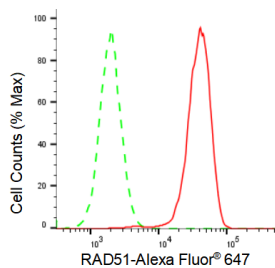
Immunohistochemistry was performed on paraffin-embedded mouse kidney using RAD51 antibody (KVA01729, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Immunohistochemistry was performed on paraffin-embedded mouse liver using RAD51 antibody (KVA01729, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 μ m.



Immunocytochemical staining of HAP-1 cells with RAD51 antibody (KVA01729, 1:1,000). Nuclei were stained blue with DAPI; RAD51 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 μ m.



Flow cytometric analysis of RAD51 expression in HAP-1 cells using RAD51 antibody (KVA01729, 1:2,000). Green, isotype control; red, RAD51.