

**Mouse Anti-RAD51 [MD210]: MC0453, MC0453RTU7**

**Intended Use:** For Research Use Only

**Description:** RAD51 is one of the key factors of DNA repair by homologous recombination and has been shown to have anti-apoptotic activity in tumor cells. RAD51 protein interacts with a variety of tumor suppressor proteins including p53, BRCA1 and BRCA2. Elevated expression of RAD51 enhances radio-resistance of human tumor cells. Overexpression of RAD51 protein in tumor cells renders them resistant against cytotoxic drugs like Cisplatin. RAD51 interacts with BRCA1 and BRCA2 to influence subcellular localization and cellular response to DNA damage. BRCA2 inactivation may be a key event leading to genomic instability and tumorigenesis from deregulation of RAD51. High-level expression of RAD51 has been observed in a variety of human malignancies. RAD51 overexpression correlates with histological grading of the tumor in invasive ductal mammary carcinoma.

**Specifications:**

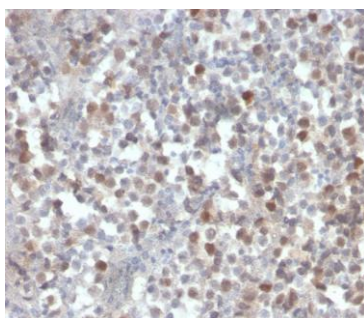
Clone: MD210  
 Source: Mouse  
 Isotype: IgG2b/k  
 Reactivity: Human  
 Immunogen: Recombinant fragment of human RAD51 protein aa 1-134  
 Localization: Nucleus  
 Formulation: Antibody in PBS pH7.4, containing BSA and  $\leq 0.09\%$  sodium azide (NaN<sub>3</sub>)  
 Storage: Store at 2°- 8°C  
 Applications: IHC, ELISA  
 Package:

Description	Catalog No.	Size
RAD51 Concentrated	MC0453	1 ml
RAD51 Prediluted	MC0453RTU7	7 ml

**IHC Procedure\*:**

Positive Control Tissue: Kidney, colon or breast carcinoma  
 Concentrated Dilution: 50-200  
 Pretreatment: Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



FFPE human kidney stained with anti-RAD51 using DAB

**References:**

1. O-GlcNAcylation Affects the Pathway Choice of DNA Double-Strand Break Repair. Averbek S, et al. Int J Mol Sci 22:N/A, 2021.
2. NR4A Nuclear Receptors Target Poly-ADP-Ribosylated DNA-PKcs Protein to Promote DNA Repair. Munnur D, et al. Cell Rep 26:2028-2036.e6, 2019.