

**Anti- RRM2 / RNR-R2 antibody, C-terminal, rabbit polyclonal**

70-050 100 µg

**Storage:** Shipped at 4°C. Upon arrival, aliquot and store at -20°C

**Reactivity:** human, mouse, rat, hamster and xenopus

**Applications**

- 1) Western blotting ( 1/1,000-1/2,000 dilution)
- 2) Immunoprecipitation (1/300-1/1,000 dilution)
- 3) Immunofluorescence staining (1/100-1/1,000 dilution)
- 4) Immunohistochemistry; paraffin section (1/300 dilution)

**Immunogen:** Synthetic peptide (11 amino acids) in the C-terminal region of human and mouse RRM2, conjugated with KLH. The exact sequence is commercially sensitive.

**Purity:** Affinity-purified with the immunogen peptide

**Form:** 1mg/ml in PBS, 50% glycerol. Filter-sterilized. Azide and carrier free.

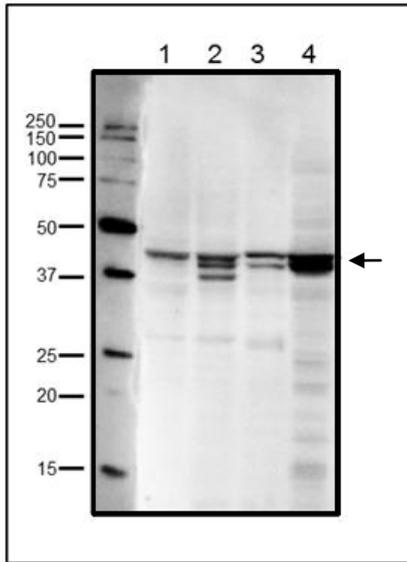
**Function:** Ribonucleoside-diphosphate reductase subunit M2 (RRM2; 389 aa, 45 kDa) also known as ribonucleotide reductase subunit R2 (RNR-R2), is a rate-limiting subunit of an enzyme that catalyzes the formation of deoxyribonucleotides from ribonucleotides. Deoxyribonucleotides in turn are used in the synthesis of DNA. Furthermore RNR plays a critical role in regulating the total rate of DNA synthesis so that DNA to cell mass is maintained at a constant ratio during cell division and DNA repair. It has been shown that MMR2 undergoes phosphorylation at Ser20 and Thr33.

**Data Link** UniProtKB/Swiss-Prot [P31350](#) (RIR2\_HUMAN)

**Reference** : This product was used in the following publication.

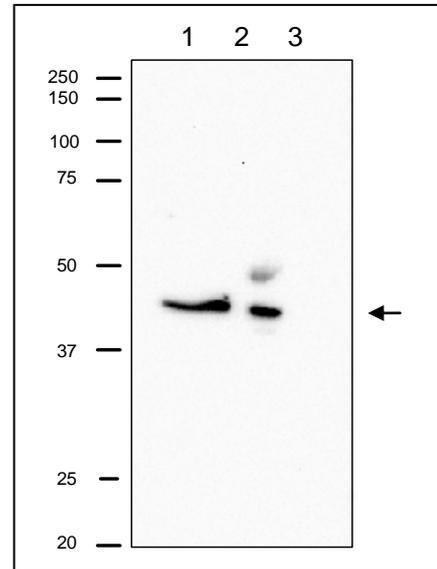
Takada S. et al. Identification of ribonucleotide reductase protein R1 as an activator of microtubule nucleation in *Xenopus* egg mitotic extracts. *Mol Biol. Cell* 11,: 41734187 (2000) PMID: [11102516](#)

WB



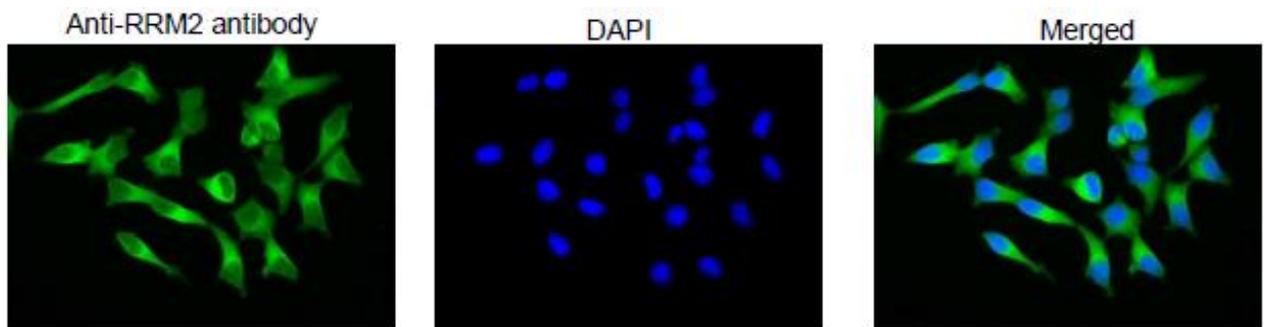
**Fig.1 Western blot analysis of endogenous RRM2 in crude cell extracts**

1. HeLa cells (20  $\mu$ g)  
 2. MCF7 cells (20  $\mu$ g)  
 3. NIH3T3 cells (20  $\mu$ g)  
 4. Xenopus eggs at mitotic stage (20  $\mu$ g)  
 Multiple bands are due to phosphorylation at Ser20 and/or Thr33 (human sequence). The antibody was used at 1/1,000 dilution



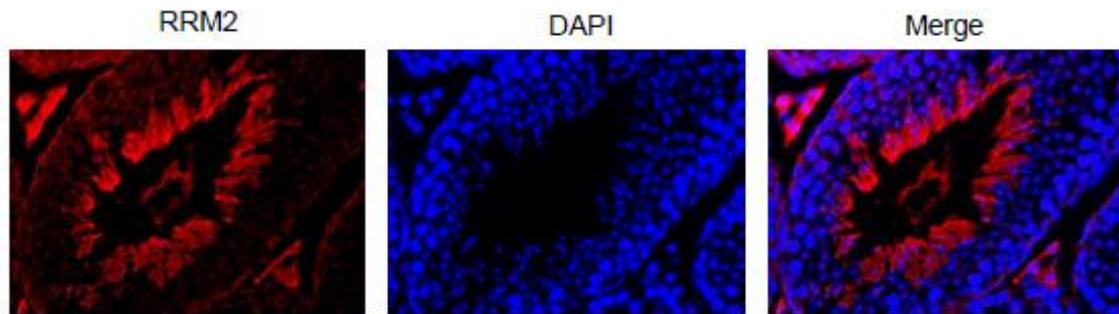
**Fig.2 Immunoprecipitation of RRM2 from CHO cells.**

Lane 1; Crude extract of CHO cells  
 Lane 2; The immunoprecipitate with the antibody at 1/1,000 dilution.  
 Lane 3; Supernatant of immuno-precipitation.  
 The upper band in lane 2 is IgG heavy chain  
 The antibody was used at 1/500 dilution



**Fig.3 Immunofluorescence staining of RRM2 protein in MCF7 cells with anti-RRM2 antibody.**

MCF7 cells were fixed with 4%PFA and permeabilized with 0.25% TritonX 100 and reacted with anti-RRM2 antibody at 1/100 dilution. As the second antibody, anti-rabbit IgG antibody conjugated with Alexa Fluor 488 (Abcam) was used at 1/1,000 dilution. DNA was stained with 1.0 $\mu$ g/mL DAPI in TBS.



**Fig.4 Immunohistochemical staining of RRM2 in mouse testis with anti-RRM2 antibody.**

Section of formalin-fixed and paraffin embedded mouse testis was reacted with anti-RRM2 antibody at 1/300 dilution. Nuclear DNA was stained with DAPI (center) and merged image is shown on left. RRM2 is abundantly expressed in actively proliferating cells