

Anti-Rhp51 /Rad51 (*S. pombe*) antibody, rabbit polyclonal, ChIP grade, Validated with *rhp51* mutant.

Cat,#63-001, Size:50µl

Background:

Rhp51 protein of *Schizosaccharomyces pombe* (fission yeast) is a functional and structural homolog of *E.coli* RecA protein and Rad51 proteins of eukaryotes, which play a major role in genetic recombination and recombination repair by mediating strand exchange reaction between homologous DNA strands.

Specifications:

Reactivity: *Schizosaccharomyces pombe*. Specificity has been validated with *rhp51* mutant for WB (Fig.1)

Immunogen: Purified recombinant full-length Rhp51 protein

Form: Rabbit antiserum added with 0.09 % sodium azide

Storage temperature: Shipped at 4°C and store at -20°C

Applications:

- Western blotting (1/ 2,000~1/5,000) Fig.1
- Immunoprecipitation (1/100-1/500)
- Chromatin Immuno-Precipitation (Assay dependent)
- Immunofluorescence staining (1/500 dilution). Fig. 2

Data Link UniProtKB/Swiss-Prot [P36601](#) (RAD51_SCHPO)

References: This product has been used in the following publication

1. Akamatsu Y et al. Two different Swi5-containing protein complexes are involved in mating-type switching and recombination repair in fission yeast. [Proc Natl Acad Sci U S A](#). 2003 Dec 23;100(26):15770-5. **WB, IP (S. pombe)**
2. Kibe T et al. Fission yeast Rhp51 is required for the maintenance of telomere structure in the absence of the Ku heterodimer. [Nucleic Acids Res](#). 2003 Sep 1;31(17):5054-63. **ChIP (S. pombe)**
3. Lambert S *et al* "Gross chromosomal rearrangements and elevated recombination at an inducible site-specific replication fork barrier" *Cell* **121**: 689-702 (2005) PMID: [15935756](#) **IF (S. pombe)**
4. Morishita T *et al* "Role of the *Schizosaccharomyces pombe* F-Box DNA helicase in processing recombination intermediates" *Mol Cell Biol* **25**: 8074-8083 (2005) PMID: [16135799](#) **IF (S.pombe)**
5. Haruta N *et al* "The Swi5-Sfr1 complex stimulates Rhp51/Rad51-and Dmc1-mediated DNA strand exchange in vitro" *Nat Struc Mol Biol* **13**: 823-830 (2006) PMID: [16921379](#) **WB, IP (S. pombe)**
6. Akamatsu Y et al. Fission yeast Swi5/Sfr1 and Rhp55/Rhp57 differentially regulate Rhp51-dependent recombination outcomes. [EMBO J](#). 2007 Mar 7;26(5):1352-62. **IF (S. pombe)**

7. Polakova S et al. Dbl2 Regulates Rad51 and DNA Joint Molecule Metabolism to Ensure Proper Meiotic Chromosome Segregation. [PLoS Genet.](#) 2016 Jun 15;12(6):e1006102. **IF (S. pombe)**

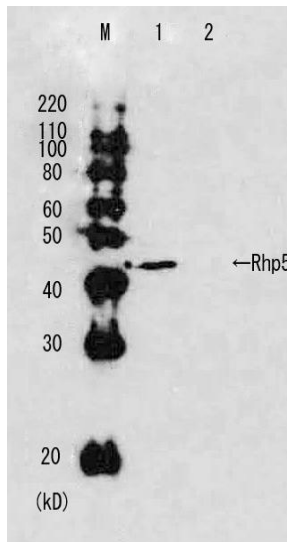


Fig.1 Western blot analysis of Rhp51 in the whole cell extracts.

M: Molecular size markers (kD)

Lane 1: Wild-type strain

Lane2: Rhp51 deletion mutant strain

Note that Rhp51 band is detected in lane 1, wild-type extract, but is absent in lane 2, *rhp51* mutant extract.

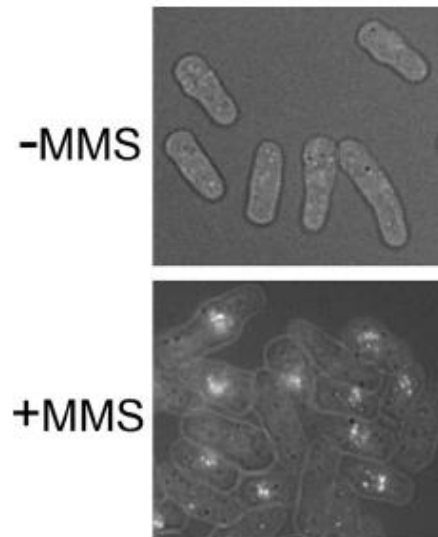


Fig. 2 Rhp51 foci formation observed after

DNA damage: *S. pombe* cells without or with MMS (0.025%) treatment for 1 h were processed for indirect immunofluorescence staining with anti-Rhp51 antibody (1/500 dilution). The Rhp51 foci formation is induced by DNA-damage treatment with MMS.