

Anti-Rhp51 (*S. pombe*) antibody, rabbit serum

Product code	63-001
Size	100 µl
Storage	Store 4°C for short term For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Concentration	N/A
Buffer	0.09% sodium azide
Purity	Rabbit antiserum
Immunogen	Purified recombinant full-length Rhp51 protein
Isotype	Rabbit IgG
Reactivity	<i>Schizosaccharomyces pombe</i>
Special notes	Validation: Specificity has been validated by western blotting with rhp51 deletion mutant (Fig.1)
Application	1. Western blotting (1/ 2,000~1/5,000) Fig.1 2. Immunoprecipitation (1/100-1/500) 3. Chromatin Immuno-Precipitation (Assay dependent) 4. Immunofluorescence staining (1/500 dilution). Fig. 2
Background	Rhp51 protein of <i>Schizosaccharomyces pombe</i> (fission yeast) is a functional and structural homolog of <i>E.coli</i> 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.
Data Link	UniProtKB/Swiss-Prot P36601 (RAD51_SCHPO)
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

Data Images: 63-001 Anti-Rhp51 (*S. pombe*) antibody, rabbit serum

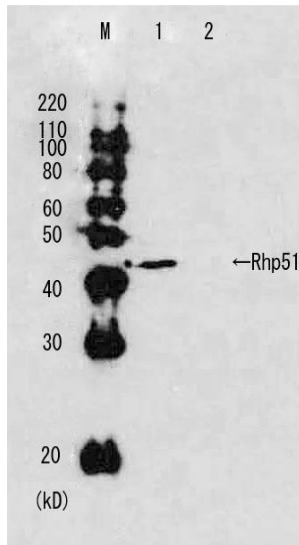


Fig.1 Western blot analysis of Rhp51 in the whole cell extracts.

M: Molecular size markers (kD)

Lane 1: Wild-type strain

Lane 2: Rhp51 deletion mutant strain

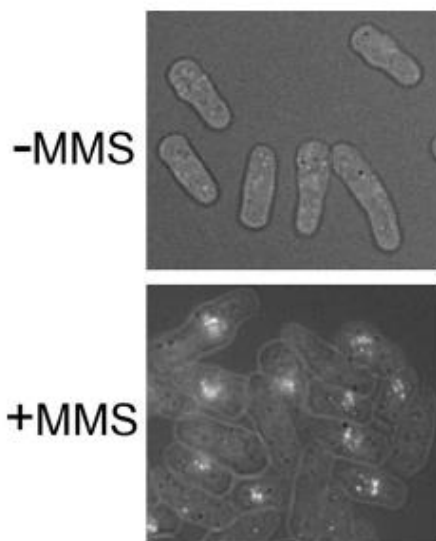


Fig.2 Rhp51 foci formation observed after DNA damage

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).

Reference: This product has been used in the following publications

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)**
8. Yadav RK. Histone H3G34R mutation causes replication stress, homologous recombination defects and genomic instability in S. pombe. [Elife](#). 2017 Jul 18;6. pii: e27406. PMID: 28718400.
WB, IF (S. pombe)