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

Product code	63-012
Size	100 µg
Storage	-20℃
Concentration	1.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from rabbit antiserum.
Immunogen	Purified recombinant full-length Rhp51 protein.
Isotype	Rabbit IgG
Reactivity	*Schizosaccharomyces pombe*
Special notes	Validation: Specificity has been validated by western blotting with rhp51 deletion mutant (Fig.1)
Application	1. Western blotting (1-10 µg/ml) Fig.3 2. Immunoprecipitation (1/100-1/500 #63-001) 3. Chromatin Immuno-Precipitation (Assay dependent) 4. Immunofluorescence staining (1/500 dilution #63-001). Fig. 2
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.
Data Link	UniProtKB P36601 (RAD51_SCHPO)

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Data Images: 63-012 Anti-Rhp51 (S. pombe) antibody, rabbit polyclonal

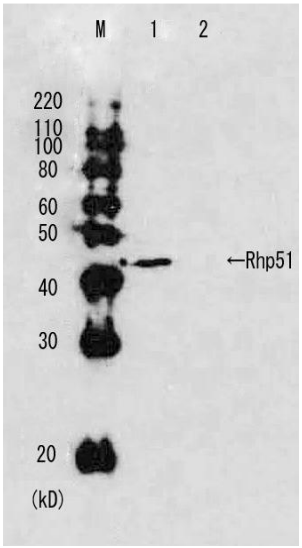

Fig.1 Western blot analysis of Rhp51 in the whole cell extracts.

M: Molecular size markers (kD)

Lane 1: Wild-type strain

Lane2: Rhp51 deletion mutant strain

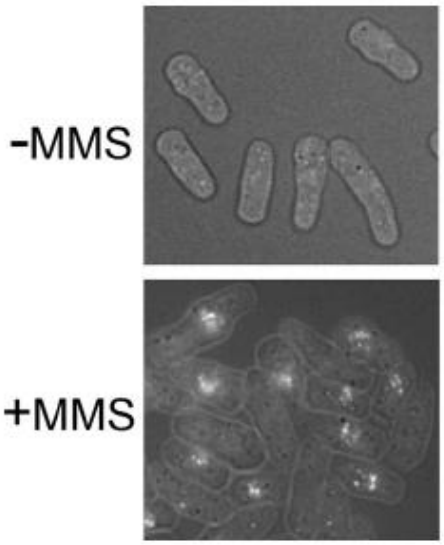

Fig. 2　Rhp51 foci formation observed after DNA damage

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).

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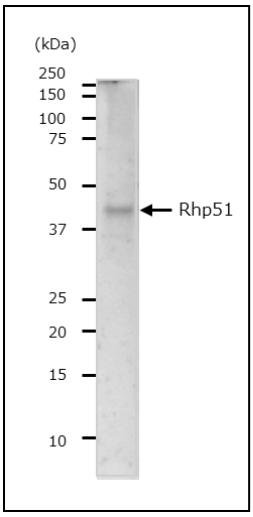

Fig.3 Western blot analysis of Rhp51 in the whole cell extracts of *S.pombe*

Wild-type strain: 50µg

1st antibody: 63-012 1µg/ml

Reference. 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*)**
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*)**

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