

## Anti-Rhp51 / Rad51 (*S. pombe*) antibody, rabbit polyclonal, validated

63-012 100 µg

**Shipping and Storage:** Shipped at 4°C or -20°C and store at -20°C.

**Immunogen:** Purified recombinant full-length Rhp51 protein

**Form:** 1.0 mg/ml IgG fraction of antiserum in PBS<sup>-</sup> with 50% glycerol

**Validation:** Specificity has been validated by western blotting with rhp51 deletion mutant (Fig.1)

**Reactivity:** *Schizosaccharomyces pombe*

### 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

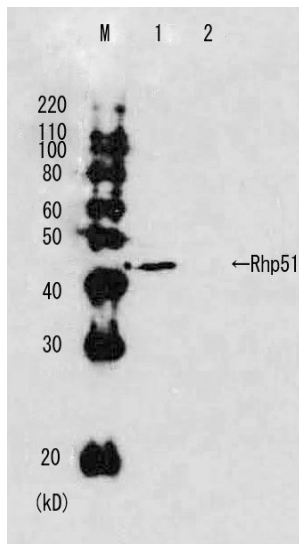
**Background:** Rhp51 protein of *Schizosaccharomyces pombe* (fission yeast) is a functional and structural homolog of *E.coli* RecA protein and Rad51 proteins of eukaryotes, which play a major role in genetic recombination and recombination repair by mediating strand exchange reaction between homologous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

**Data Link** UniProtKB/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*)**
2. 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*)**
3. 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*)**
4. Haruta N *et al* "The Swi5-Sfr1 complex stimulates Rhp51/Rad51-and Dmc1-mediated DNA strand exchange in vitro" *Nat Struct Mol Biol* **13**: 823-830 (2006) PMID: [16921379](#) **WB, IP (*S. pombe*)**
5. 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*)**

6. 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*)**
7. 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*)**

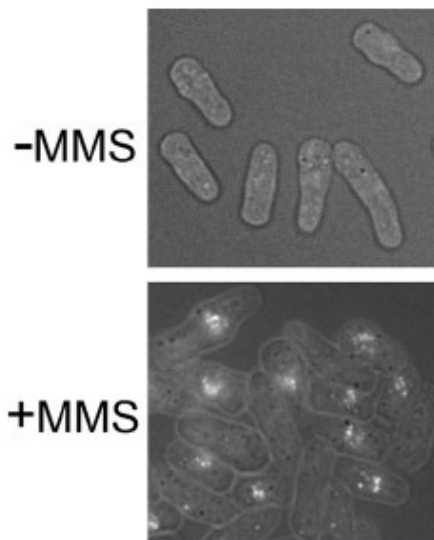


**Fig.1 Western blot analysis of Rhp51 in the whole cell extracts.**

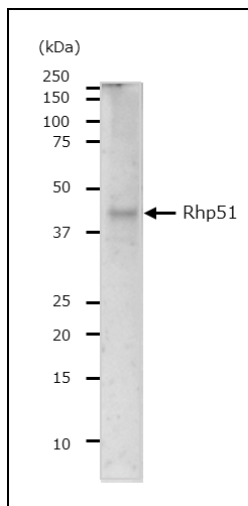
M: Molecular size markers (kD)

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).



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

Wild-type strain: 50 $\mu$ g

1st antibody: 63-001p 1 $\mu$ g/ml

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.