

Anti-Rad51 (human) antibody, chicken polyclonal (IgY)

70-005

100 µg

Storage: -20°C

Immunogen: Full-size recombinant human Rad51 protein.(BioAcademia [10-001](#))

Form: 1 mg/ml in PBS- with 50% glycerol. No preservative nor carrier protein.

Purity: Purified by propriety protocol. More than 95% pure as judged from SDS-PAGE

Reactivity: human, rodents, chicken, frog

Applications

- 1) Western blotting (1/1,000~1/5,000 dilution)
- 2) Immunoprecipitation (1/100-1/1,000)
- 3) Chromatin immunoprecipitation (assay dependent)
- 4) Immunofluorescence staining (1/100-1/1,000)

* In general, IgY antibody shows significantly less backgrounds than IgG antibody of mammals in immuno-reactions

Background: Human Rad51 protein is a functional and structural homolog of *E. coli* RecA protein, which plays a major role in genetic recombination and recombination repair by mediating strand exchange reaction between homologous DNA strands . Rad51 functionally and physically interacts with its paralogs, Dmc1, Rad51B, Rad51C, Rad51D, Xrcc2 and Xrcc3, and also with Rad52 in recombination processes. It also interacts with oncogenes and tumor suppressors such as BRCA1, BRCA2, and P53 for the maintenance of genome stability .

Data Link UniProtKB/Swiss-Prot [Q06609](#) (RAD51_HUMAN)

References: This antibody has been used in the following publications.

1. Nakada S. et al. RNF8 regulates assembly of RAD51 at DNA double-strand breaks in the absence of BRCA1 and 53BP1. [Cancer Res.](#) 2012 Oct 1;72(19):4974-83. **IF (human)**

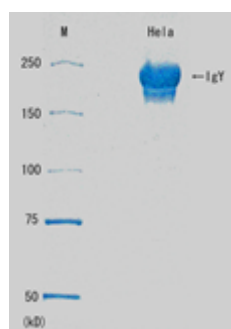


Fig.1 SDS-PAGE of anti-Rad51 IgY
Non-reduced



Fig. 2 Western blot analysis of Rad51 in HeLa cell extract (1/2,000 dilution)

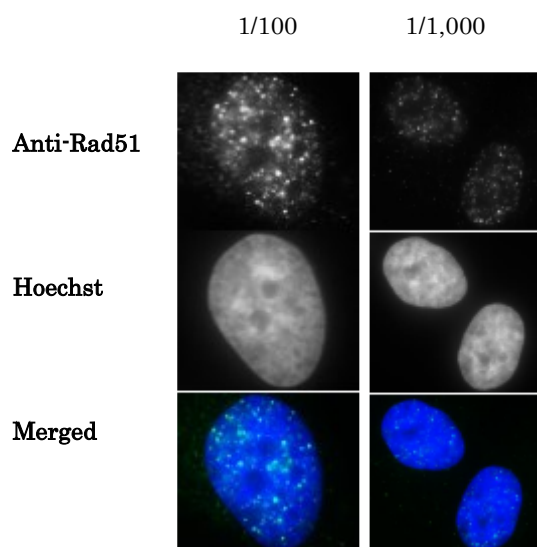


Fig.3. Detection of Rad51 protein foci formation with the anti-Rad51 antibody in X-ray irradiated human fibroblast cells, GM0637.

- 1) The cells were irradiated with X-ray at 2 Gy, grown for 1 hr, fixed with 4% paraformaldehyde for 10 min and washed with PBS three times.
- 2) Permeabilized by treatment with 0.5% Triton for 5 min and washed with PBS three times.
- 3) Incubated with the anti-Rad51 antibody at 1/100 dilution or 1/1,000 dilution for 30 min at 37°C and washed with PBS three times.
- 4) As the second antibody, Alexa488-conjugated anti-chicken IgY antibody was used at 1/5,000 dilution.
- 5) DNA was stained with Hoechst for 1 min and mounted.

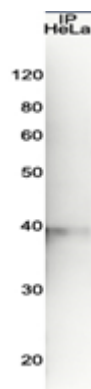


Fig.4 Immunoprecipitation of Rad51 from crude extract of HeLa cells

Rad51 was immunoprecipitated from HeLa cell extract, 20 μ g, with anti-Rad51 IgY conjugated to Sepharose 4B and the eluate was immunoblotted with rabbit anti-Rad51 antibody (BioAcademia 70-012)

Related Products:

[01-001](#) E.coli RecA protein, function [10-001](#) Rad51 protein (human), functional,

[10-003](#) Rad52 protein (human), functional

[61-004](#) anti-RecA antibody, rabbit polyclonal

[62-101](#) anti-Rad51 (*S. cerevisiae*) antibody, rabbit polyclonal

[63-001](#) anti-Rhp51 (*S. pombe*) antibody, rabbit polyclonal

[70-001](#) anti-Rad51 antibody, rabbit antiserum

[70-012](#) anti-Rad51 antibody, rabbit polyclonal, affinity-purified

[70-015](#) anti-Rad52 (human) 抗体, affinity purified

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