

Datasheet for ABIN2452204

**RAD51 Protein**[Go to Product page](#)**1** Image**2** Publications

## Overview

|                      |                            |
|----------------------|----------------------------|
| Quantity:            | 20 µg                      |
| Target:              | RAD51                      |
| Origin:              | Human                      |
| Source:              | Escherichia coli (E. coli) |
| Protein Type:        | Recombinant                |
| Biological Activity: | Active                     |
| Application:         | Functional Studies (Func)  |

## Product Details

|                  |   |
|------------------|---|
| Characteristics: | This product was confirmed to possess single strand DNA stimulated ATPase activity. |
| Purity:          | > 95 % as judged from SDS-PAGE analysis   |

## Target Details

|                   |   |
|-------------------|---|
| Target:           | RAD51   |
| Alternative Name: | Rad51 ( <a href="#">RAD51 Products</a> )  |
| 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 oncogene proteins and tumor suppressors such as BRCA1, BRCA2, and P53 for the maintenance of genome stability. Rad51 |

## Target Details

protein was highly purified from E. coli over-expressing human Rad51 protein as a recombinant protein. Since the tag was removed from the recombinant protein (it still contains Gly-Ser-His at the N-terminal), it has been shown to retain nuclear filament forming and strand-exchange activity as well as interaction with Rad52.

UniProt: [Q06609](#)

Pathways: [DNA Damage Repair](#)

## Application Details

Application Notes: 1) Studies on homologous recombination in mammals including human  
2) Studies on the interaction of Rad51 protein with various proteins  
3) To be used as a standard for Western blotting

Restrictions: For Research Use only

## Handling

Format: Liquid

Concentration: 1.0 mg/mL

Buffer: 20 mM Tris-HCl pH 8.0, 100 mM KCl, 1 mM DTT, 0.5 mM EDTA, 10 % glycerol

Preservative: Dithiothreitol (DTT)

Precaution of Use: This product contains Dithiothreitol (DTT): a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

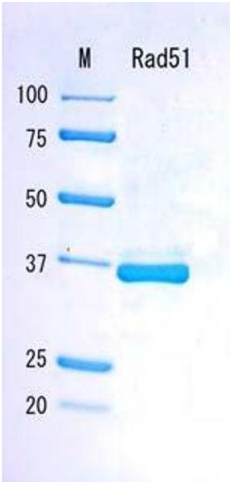
Storage: -20 °C/-80 °C

Storage Comment: Store at -80 C for long period.

## Publications

Product cited in: Murayama, Kurokawa, Mayanagi, Iwasaki: "Formation and branch migration of Holliday junctions mediated by eukaryotic recombinases." in: **Nature**, Vol. 451, Issue 7181, pp. 1018-21, (2008) ([PubMed](#)).

Kurumizaka, Aihara, Kagawa, Shibata, Yokoyama: "Human Rad51 amino acid residues required for Rad52 binding." in: **Journal of molecular biology**, Vol. 291, Issue 3, pp. 537-48, (1999) ([PubMed](#)).



**SDS-PAGE**

**Image 1.**