# Recombinant RAD17 protein (His tag)

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| **Catalog Number** | 546571 |
| **Synonyms** | hRad17; RF-C/activator 1 homolog |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | O75943 |
| **Molecular Weight** | Predictes a molecular mass of 31.14 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 31 kDa band. |

## Product Information

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| **Sequence Region** | 88-345 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >90%, by SDS-PAGE with Coomassie Brilliant Blue staining. |
| **Endotoxin** | Not tested. |
| **Activity** | Not tested. |
| **Stability** | Samples are stable for up to twelve months from date of receipt at -70℃ |
| **Protein Construction** | DNA encoding 88-345 aa (O75943) were fused with 6His tag. |

## Storage & Handling

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| **Reconstitution** | Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. |
| **Storage** | Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **Shipping** | In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant Human RAD17 (hRad17) Fragment (aa 88-345) is a high-quality, soluble protein fragment derived from the cell cycle checkpoint protein RAD17. This fragment is designed for structural and biochemical studies, offering researchers a stable and functional unit to investigate DNA damage response mechanisms and checkpoint activation pathways.<br>The full-length Cell cycle checkpoint protein RAD17 (hRad17) is essential for maintaining chromosomal stability, sustained cell growth, and ATR-dependent checkpoint activation following DNA damage. It exhibits weak ATPase activity required for chromatin binding and plays a critical role in recruiting the 9-1-1 complex (RAD1-RAD9-HUS1) and RHNO1 to chromatin, facilitating CHEK1 activation. RAD17 is also involved in homologous recombination by mediating the recruitment of the MRN complex to DNA damage sites and may function as a sensor of DNA replication progression. Located primarily in the nucleus and associated with chromosomes, phosphorylated RAD17 redistributes to discrete nuclear foci upon DNA damage and localizes to DNA double-strand breaks, underscoring its pivotal role in genome integrity and cellular stress responses. |