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## Product Data Sheet

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Product Name: RAD1 Human  
 Cat. No.: GP24314  
 Batch No.: 1

### Product Data

|                     |  |                    |                         |
|---------------------|--|--------------------|-------------------------|
| Purity              | >98%   | Source             | Escherichia Coli.       |
| Physical Appearance | solid  | Shipping Condition | Shipped with Ice Packs. |
| Synonyms            | RAD-1; HRAD1; REC1; Cell cycle checkpoint protein RAD1; hRAD1; EC=3.1.11.2; DNA repair exonuclease rad1 homolog; Rad1-like DNA damage checkpoint protein.  |                    |                         |
| Amino Acid Sequence | MGSSHHHHHH SGLVPRGSH MPLLTQQIQD EDDQYSLVAS LDNVRNLSTI<br>LKAHFREHA TCFATKNGIK VTVENAKCVQ ANAFIQAGIF QEFKVQEEVS<br>TFRINLTVLL DCLSIFGSSP MPGTLTALRM CYQGYGYPLM LFLEEGGVVT<br>VCKINTQEPE ETLDFDFCST NVINKIILQSEGLREAFSEL DMTSEVLQIT<br>MSPDKPYFRL STFGNAGSSH LDYPKDSDLM EAFHCNQTQV NRYKISLLKP<br>STKALVLSCK VSIRTDNRGF LSLQYMIRNE DGQICFVEYY CCPDEEVPE ES. |                    |                         |
| Formulation         | RAD1 Human solution containing 20mM Tris pH-8, 1mM DTT, 0.2M NaCl & 10% glycerol.  |                    |                         |

### Introduction

RAD1 is part of a heterotrimeric cell cycle checkpoint complex, recognized as the 9-1-1 complex, that is activated to stop cell cycle progression in reaction to DNA damage or incomplete DNA replication. RAD1 complex withholds the Rad9 and Hus1 proteins and takes part in cellular responses to DNA damage, by associating with Rad17 and several components of the PCNA-loading heteropentamer, replication factor C. RAD1 takes part in DNA repair and recruited to DNA lesion upon damage by the RAD17-replication factor C (RFC) clamp loader complex. RAD1 takes part as a sliding clamp platform on DNA for several proteins that play a role in long-patch base excision repair (LP-BER). RAD1 complex stimulates DNA polymerase beta (POLB) activity by raising its affinity for the 3'-OH end of the primer-template and stabilizes POLB to those sites where LP-BER proceeds.

### Stability

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

RAD1 Recombinant Human produced in E.Coli is a single, non-glycosylated polypeptide chain containing 301 amino acids (1-282 a.a.) and having a molecular mass of 33.9 kDa. The RAD1 is fused to 20 amino acid His-Tag at N-terminus and purified by proprietary chromatographic techniques.

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