

## Rabbit RAD1 Polyclonal Antibody | anti-RAD1 antibody

RAD1 Antibody

| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                              |
|-----------|--------|-------------------|-------------------------------------------|
| AAA325977 | Rabbit | Human, Mouse, Rat | ELISA, Immunohistochemistry, Western Blot |

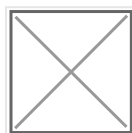
### PRODUCT SYNONYMS

RAD1; Polyclonal Antibody; RAD1 Antibody; Cell cycle checkpoint protein Hrad1; Cell cycle checkpoint protein Rad 1 A/B; Cell cycle checkpoint protein RAD1; Checkpoint control protein HRAD1; Checkpoint control protein RAD1; DNA repair exonuclease; DNA repair exonuclease rad1; DNA repair exonuclease rad1 homolog; DNA repair exonuclease REC1; DNA repair protein RAD1; EC 3.1.11.2; Exonuclease homolog RAD1; GTP-binding protein RAD; hRAD 1; hRAD1; MGC77779; RAD 1; RAD; RAD1 homolog (S. pombe); RAD1 homolog; Rad1 like DNA damage checkpoint; Rad1 like DNA damage checkpoint protein; S. pombe; homolog of; Rad1-like DNA damage checkpoint protein; RAD1\_HUMAN; Ras associated with diabetes; REC 1; REC1; RRAD; anti-RAD1 antibody

### PRODUCT SPECIFICATIONS

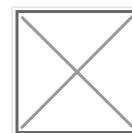
|                                                |                                                                                                   |
|------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Host                                           | Rabbit                                                                                            |
| Reactivity                                     | Human, Mouse, Rat                                                                                 |
| Clonality                                      | Polyclonal                                                                                        |
| Isotype                                        | IgG                                                                                               |
| Specificity                                    | RAD1 antibody detects endogenous levels of total RAD1                                             |
| Purity/Purification                            | The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.     |
| Form/Format                                    | Liquid<br>Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.     |
| Concentration                                  | 1mg/ml (varies by lot)                                                                            |
| Sequence Length                                | 282                                                                                               |
| Applicable Applications for anti-RAD1 antibody | ELISA, IHC (Immunohistochemistry), WB (Western Blot)                                              |
| Immunogen                                      | A synthesized peptide derived from human RAD1                                                     |
| Subcellular Location                           | Nucleus.                                                                                          |
| Tissue Specificity                             | Expressed in testis, uterus, bladder, spleen, ovaries, lung, brain and muscle (at protein level). |
| Conjugation                                    | Unconjugated                                                                                      |
| Preparation and Storage                        | Store at -20 degree C. Stable for 12 months from date of receipt.                                 |

### IMAGES



#### WB (Western Blot)

Western blot analysis of Hela lysate using RAD1 antibody. The lane on the left is treated with the antigen-specific peptide.



#### IHC (Immunohistochemistry)

AAA325977 at 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-RAD1 antibody | <p>Description: This gene encodes a component of a heterotrimeric cell cycle checkpoint complex, known as the 9-1-1 complex, that is activated to stop cell cycle progression in response to DNA damage or incomplete DNA replication. The 9-1-1 complex is recruited by RAD17 to affected sites where it may attract specialized DNA polymerases and other DNA repair effectors. Alternatively spliced transcript variants of this gene have been described. [provided by RefSeq, Jan 2009]</p> <p>Function: Component of the 9-1-1 cell-cycle checkpoint response complex that plays a major role in DNA repair (PubMed:10846170, PubMed:10884395). The 9-1-1 complex is recruited to DNA lesion upon damage by the RAD17-replication factor C (RFC) clamp loader complex (PubMed:12578958). Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair (LP-BER) (PubMed:15871698). The 9-1-1 complex stimulates DNA polymerase beta (POLB) activity by increasing its affinity for the 3'-OH end of the primer-template and stabilizes POLB to those sites where LP-BER proceeds; endonuclease FEN1 cleavage activity on substrates with double, nick, or gap flaps of distinct sequences and lengths; and DNA ligase I (LIG1) on long-patch base excision repair substrates (PubMed:15314187, PubMed:15556996, PubMed:15871698). The 9-1-1 complex is necessary for the recruitment of RHO1 to sites of double-stranded breaks (DSB) occurring during the S phase (PubMed:21659603). Isoform 1 possesses 3'-&gt; 5' double stranded DNA exonuclease activity (PubMed:9660799).</p> <p>Subunit Structure: Component of the toroidal 9-1-1 (RAD9-RAD1-HUS1) complex, composed of RAD9A, RAD1 and HUS1 (PubMed:10846170, PubMed:10884395). The 9-1-1 complex associates with LIG1, POLB, FEN1, RAD17, HDAC1, RPA1 and RPA2 (PubMed:10846170, PubMed:10884395, PubMed:15314187, PubMed:15556996, PubMed:15871698, PubMed:15897895, PubMed:16216273). The 9-1-1 complex associates with the RAD17-RFC complex (PubMed:12578958). RAD1 interacts with POLB, FEN1, HUS1, HUS1B, RAD9A and RAD9B (PubMed:10359610, PubMed:10777662, PubMed:11944979, PubMed:14500360, PubMed:14611806, PubMed:15314187, PubMed:15556996, PubMed:16216273). Interacts with DNAJC7 (PubMed:11573955).</p> <p>Similarity: Belongs to the rad1 family.</p> |
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NCBI AND UNIPROT INFORMATION

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| NCBI GI #                        | 4506385                                                |
| NCBI GeneID                      | 5810                                                   |
| NCBI Accession #                 | NP_002844.1                                            |
| NCBI GenBank Nucleotide #        | NM_002853.3                                            |
| UniProt Accession #              | O60671; O75572; O95304; Q1W161; Q5KSM0; Q5KSM1; Q9UEP1 |
| Molecular Weight                 | Observed: 30-40 kDa<br>Predicted: 32 kDa               |
| NCBI Official Full Name          | cell cycle checkpoint protein RAD1                     |
| NCBI Official Synonym Full Names | RAD1 checkpoint DNA exonuclease                        |
| NCBI Official Symbol             | RAD1                                                   |
| NCBI Official Synonym Symbols    | REC1; HRAD1                                            |
| NCBI Protein Information         | cell cycle checkpoint protein RAD1                     |
| UniProt Protein Name             | Cell cycle checkpoint protein RAD1                     |
| UniProt Gene Name                | <b>RAD1</b>                                            |
| UniProt Synonym Gene Names       | REC1; hRAD1                                            |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.