

RAD1 Antibody (N-Terminus, clone 4126)
Mouse Monoclonal Antibody
Catalog # ALS11866**Specification**

RAD1 Antibody (N-Terminus, clone 4126) - Product Information

Application	IHC
Primary Accession	O60671
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	32kDa KDa

RAD1 Antibody (N-Terminus, clone 4126) - Additional Information**Gene ID** 5810**Other Names**

Cell cycle checkpoint protein RAD1, hRAD1, 3.1.11.2, DNA repair exonuclease rad1 homolog, Rad1-like DNA damage checkpoint protein, RAD1, REC1

Target/Specificity

Amino terminal fragment of human Rad1 purified from E. coli.

Reconstitution & Storage

Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

Precautions

RAD1 Antibody (N-Terminus, clone 4126) is for research use only and not for use in diagnostic or therapeutic procedures.

RAD1 Antibody (N-Terminus, clone 4126) - Protein Information**Name** RAD1**Synonyms** REC1**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 RHN01 to sites of double-stranded breaks (DSB) occurring during the S phase (PubMed:21659603).

Cellular Location

Nucleus.

Tissue Location

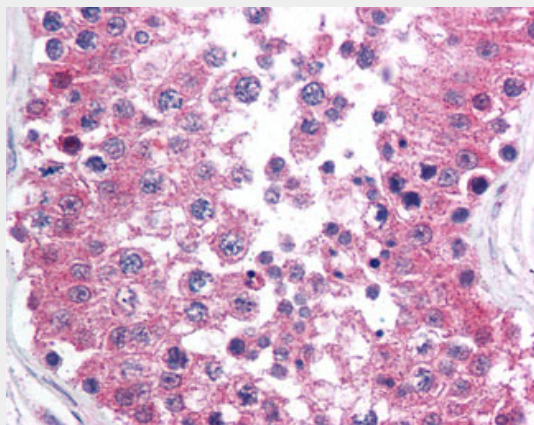
Expressed in testis, uterus, bladder, spleen, ovaries, lung, brain and muscle (at protein level)

RAD1 Antibody (N-Terminus, clone 4126) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

RAD1 Antibody (N-Terminus, clone 4126) - Images



Anti-RAD1 antibody IHC of human testis.

RAD1 Antibody (N-Terminus, clone 4126) - Background

Component of the 9-1-1 cell-cycle checkpoint response complex that plays a major role in DNA repair. The 9-1-1 complex is recruited to DNA lesion upon damage by the RAD17-replication factor C (RFC) clamp loader complex. Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair (LP-BER). 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. The 9-1-1 complex is necessary for the recruitment of RHNO1 to sites of double-stranded breaks (DSB) occurring during the S phase. Isoform 1 possesses 3'->5' double stranded DNA exonuclease activity.

RAD1 Antibody (N-Terminus, clone 4126) - References

Freire R.,et al.Genes Dev. 12:2560-2573(1998).
Bluyssen H.A.R.,et al.Genomics 54:331-337(1998).
Marathi U.K.,et al.Genomics 54:344-347(1998).
Dean F.B.,et al.Genomics 54:424-436(1998).
Parker A.E.,et al.J. Biol. Chem. 273:18332-18339(1998).