



## **Anti-Rad18 (mouse) antibody, rabbit polyclonal IgG**

The Rad6 (UBE2B)-Rad18 pair of genes plays a critical role in post-replication repair of damaged DNA. Rad6 protein functions as an E2 enzyme and Rad18 (509 aa, 57.4 kDa) as a ubiquitin ligase (E3) which ubiquitinates PCNA. Rad18 recruits translesion DNA polymerases to damaged DNA.

### **Applications (see Ref 1~3)**

- 1) Western blotting (1,000 fold dilution).
- 2) Immuno-precipitation (200~500 dilution))
- 3) Indirect immuno-fluorescence staining. (assay dependent)
- 4) Immuno-histochemistry (100~300 fold dilution)

**Immunogen:** GST-fusion protein containing 100 carboxyl terminal amino acids of mouse Rad18

**Reactivity:** Mouse Rad18 protein. Not reactive to human Rad18.

**Product:** IgG fraction of anti-mouse Rad18 rabbit serum

**Form:** 1 mg/ml in PBS, 50% glycerol, filter-sterilized. Azide and carrier-protein free

**Size:** 100 ug

**Storage:** Sent at 4°C or -20°C. Upon arrival, spin-down and store at -20°C

**Database Link:** UniProtKB/Swiss-Prot [Q9QXK2](#) Mouse Rad18

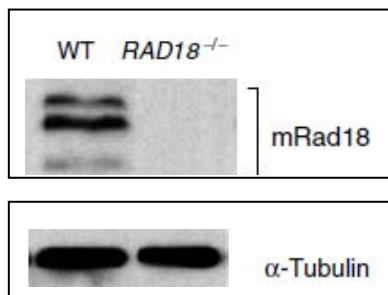
Gene ID [16098139](#) Mouse Rad18

### **Publications: This product has been used in the following publications.**

1. Tateishi S. et al. (2003) Enhanced genomic instability and defective postreplication repair in RAD18 knockout mouse embryonic stem cells. Mol Cell Biol 23:474-81. **PubMed** [12509447](#) **WB, IF/IC**
2. Watanabe K. et al. (2004) Rad18 guides poleta to replication stalling sites through physical interaction and PCNA monoubiquitination. EMBO J. 23:3886-96. **PubMed** [15359278](#) **WB**
3. Masuyama S. et al. (2005) Regulated expression and dynamic changes in subnuclear localization of mammalian Rad18 under normal and genotoxic conditions. Genes Cells. 10:753-62. **PubMed** [16098139](#) **IHC**
4. Sun J. et al. (2009) Rad18 is required for long-term maintenance of spermatogenesis in mouse testes. Mech Dev 126:173-83. **PubMed** [19068231](#) **IHC, WB**

**Related Products:** [70-020 anti-Rad6 antibody](#)

[70-023 anti-Rad18 \(human\) antibody](#)

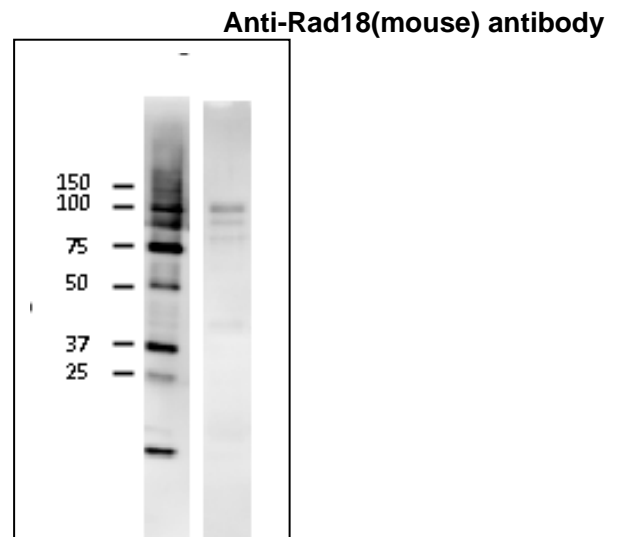


**Fig.1. Identification of mouse Rad18 protein in ES cells by Western blot with anti-mRad18 antibody.**

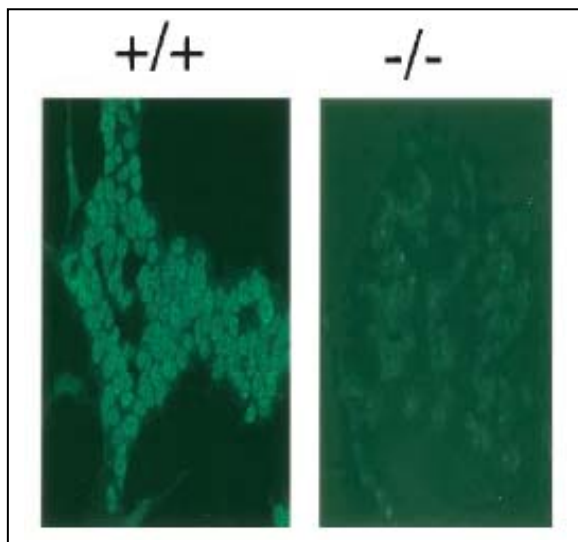
WT; Lysate of wild-type mouse ES cells

*RAD18*<sup>-/-</sup>; Lysate of *Rad18* double knock-out mouse ES cells

Protein levels of  $\alpha$ -tubulin in the lysates are shown as a control.



**Fig.2. Identification of mouse Rad18 protein in NIH3T3 cells by western blot with the antibody.** Cell extract (23 ug) was used. Anti-mouse Rad18 was used at 2,000 fold dilution. Similar to Fig.1, two extra bands (75~90 kDa) may represent modified products (ubiquitination, phosphorylation).



**Fig.3. Immunofluorescence staining of Rad18 protein with anti-mRad18 antibody.**

Wild-type (+/+) and *RAD18*<sup>-/-</sup> ES cells (-/-). Samples were prefixed 3.7% formaldehyde and fixed with 80% methanol. Anti-mRad18 antibody was used at 1/300 dilution. AS a second antibody, FITC conjugated anti-rabbit IgG was used

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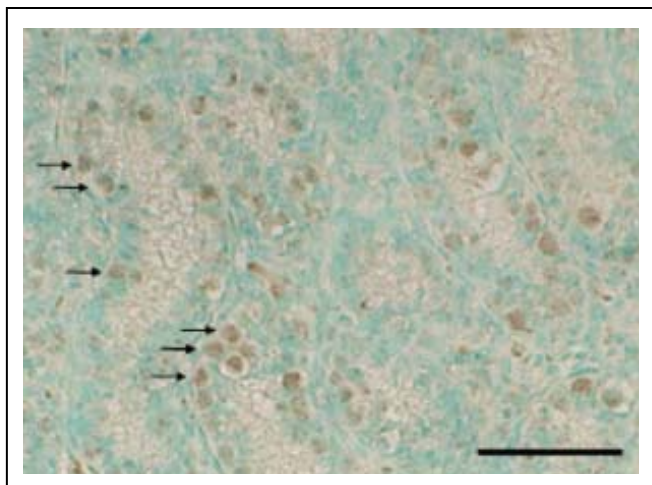
Phone : +81-3-5632-9617

E-mail: [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

FAX : +81-3-5632-9618



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**Fig.4. Detection of Rad18 in mouse testis.**

Section of paraformaldehyde fixed mouse was stained with anti-mRad18 antibody. As a second antibody, peroxidase-conjugated anti-rabbit IgG donkey antibody was used. Signals were enhanced with TSA plus biotin system and detected by using DAB substrate.

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Phone : +81-3-5632-9617

E-mail: [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

FAX : +81-3-5632-9618