

## Anti-Rad18 (human) antibody, rabbit polyclonal, affinity purified

# 70-023      100 µg

The Rad6-Rad18 pair of genes plays a critical role in post-replication repair of damaged DNA. Rad6 protein functions as an E2 enzyme and Rad18 (495 aa 56 kDa) as an ubiquitin ligase (E3) which ubiquitinates PCNA. Rad18 recruits translesion DNA polymerases to damaged DNA (ref 1~3).

### Applications see Ref 1~3

- 1) Western blot (1,000 fold dilution)
- 2) Indirect immunofluorescence staining
- 3) Immunoprecipitation

### Specification

Immunogen: GST-fusion protein containing 113 carboxyl terminal of human Rad18

Reactivity: Human Rad18. Not reactive to mouse Rad18

Purification: Polyclonal rabbit IgG fraction affinity purified with His-tagged Rad18 protein affinity column

Concentration: 1 mg/ml in PBS, 50% glycerol

Storage: Ship at 4°C or at -20°C, and long term storage at -20°C

**Data Link** UniProtKB; [E3 ubiquitin-protein ligase RAD18 - Homo sapiens \(Human\)](#)

**References:** This product has been used in the following references.

1. Miyase S *et al* "Differential regulation of Rad18 through Rad6-dependent mono- and polyubiquitination" *J Biol Chem* 280: 515-524 (2005) PMID: [15509568](#)
2. Tateishi S *et al* "Dysfunction of human Rad18 results in defective postreplication repair and hypersensitivity to multiple mutagens" *PNAS* 97: 7927-7932 (2000) PMID: [10884424](#)
3. Watanabe K *et al* "Rad18 guides poleta to replication stalling sites through physical interaction and PCNA monoubiquitination" *EMBO J* 23: 3886-3896 (2004) PMID: [15359278](#)

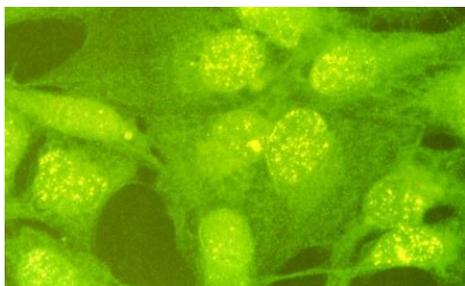


Fig. 1 Indirect immunofluorescence staining of Rad18 protein in GM637 cells.  
Rad18 protein is stained as yellow dots in nuclei.

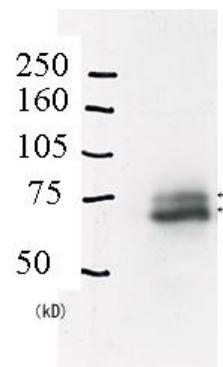
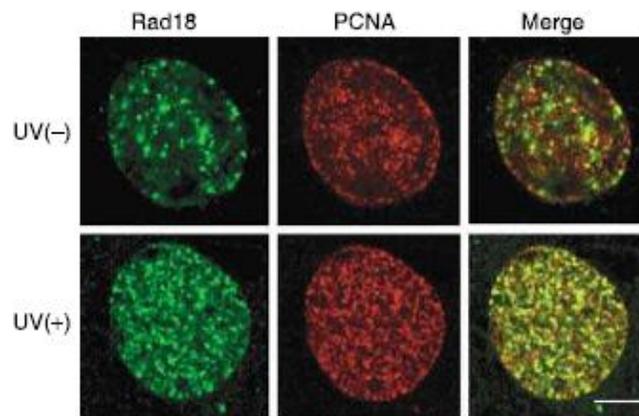


Fig. 2 Identification of Rad18 protein in crude extract of A549 cells by Western blot.

The lower thick band is native Rad18 and the upper thin band is mono-ubiquitinated Rad18 protein (ref. 1)



**Fig.3 Colocalization of Rad18 with PCNA on chromatin following UV irradiation.** UV-induced colocalization of Rad18 (green) with PCNA (red). GM637 cells irradiated at 15/m<sup>2</sup> were fixed with methanol 4h after UV irradiation and immunostained with anti-Rad18 antibody (70-023) and anti-PCNA antibody and processed for double staining.