Anti-Rad18 (human) antibody, rabbit polyclonal

70-023　　100 ug

Storage: Ship at 4℃ or at -20℃, and store at -20℃. Do not freeze.

Reactivity: Human Rad18. Not reactive to mouse Rad18

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

Applications: (see Ref 1~3)

1) Western blotting (1,000 fold dilution)　2) Indirect immunofluorescence staining

3) Immunoprecipitation

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

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

Backgrouind : 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 ubiquitine ligase (E3) which ubiquitinates PCNA. Rad18 recruits translesion DNA polymerases to damaged DNA (Ref 1~3).

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 **WB, IP, IF**
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 **IF**
3. Watanabe K *et al* "Rad18 guides pol eta to replication stalling sites through physical interaction and PCNA monoubiquitination" *EMBO J* **23**: 3886-3896 (2004) PMID: 15359278 **WB, IP, IF**

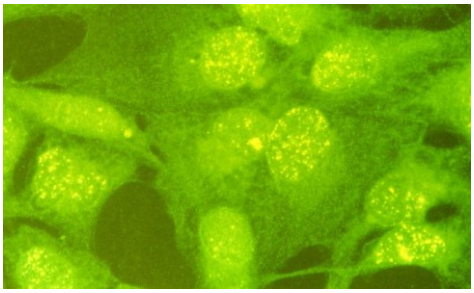

Fig.1 Indirect immunofluorescence staining of Rad18 protein in GM637 cells.

Rad18 protein is stained as yellow dots in nuclei.

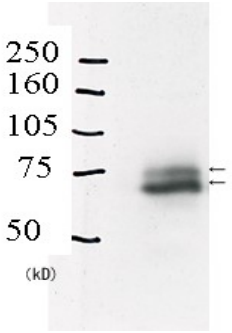

Fig.2 Identification of Rad18 protein in crude extract of A549 cells by Western blotting.

The primary and secondary antibodies are used at 1/1,000 and 1/20,000 dilutions, respectively/

The lower thick band is native Rad18 and the upper thin band is mono-ubiquitinated Rad18

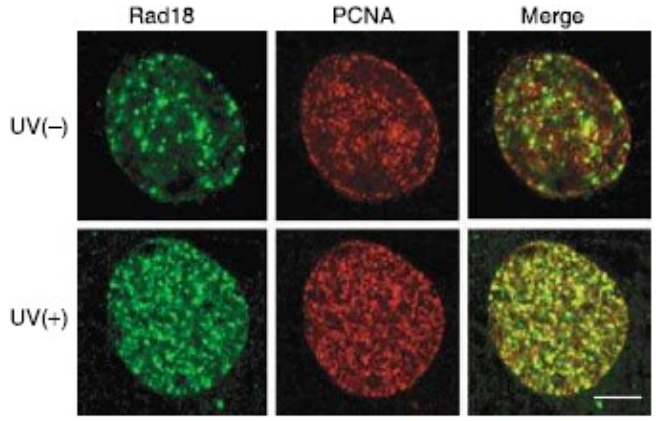

Fig.3 Colocalization of Rad18 with PCNA on chromatin following UV irradiation. UV-induced colocalization of Rad18 (green) with PCNA (red). GM637 cells irradiated at 15/m^2 were fixed with methnol 4h after UV irradiation and immunostained with anti-Rad18 antibody (70-023) and anti-PCNA antibody and processed for double staining. Anti-Rad18 was used at 1/250 dilution and as the seconday antibody, goat anti-rabbit IgG antibodies conjugated with AlexaFluor 488 was used at 4 μ g/ml..