

## Anti-*E. coli* DNA Photolyase antibody, rabbit polyclonal

61-013 200 µg

**Shipping and Storage:** Ship at 4°C and store at -20°C. Do not repeat freeze-thaw cycle

**Reactivity:** Reacts with *E. coli* pyrimidine dimer photolyase

**Immunogen:** Recombinant full-size *E. coli* Cyclobutane Pyrimidine Dimer Photolyase.

**Validation:** Purified *E. coli* photolyase.

### Applications:

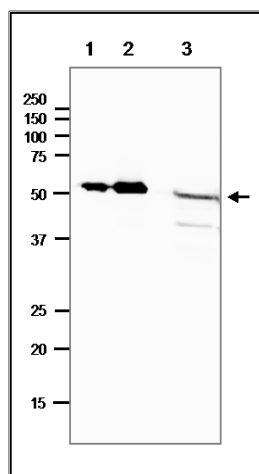
1. Western blot (1/1,000)
2. Immunoprecipitation (1/200)
3. ELISA (assay dependent)

**Purity:** Protein A-affinity purified IgG.

**Form:** 2 mg/ml in PBS, 50% glycerol, sterilized by ultrafiltration.

**Background:** Cyclobutane Pyrimidine Dimer photolyase (Deoxyribodipyrimidine photo-lyase) is involved in repair of UV radiation-induced DNA damage. Catalyzes the light-dependent monomerization (300-600 nm) of cyclobutyl pyrimidine dimers (in cis-syn configuration), which are formed between adjacent bases on the same DNA strand upon exposure to ultraviolet radiation. Upon absorption of visible light electrons are transferred from Trp-307 through Trp-360 to Trp 383, and from there to FADH, giving rise to the fully reduced catalytic FADH<sup>•</sup>. Length:472 aa. Mass (Da):53,667

**Data Link:** UniProtKB [P00914](http://www.uniprot.org/entry/P00914) (PHR\_ECOLI)

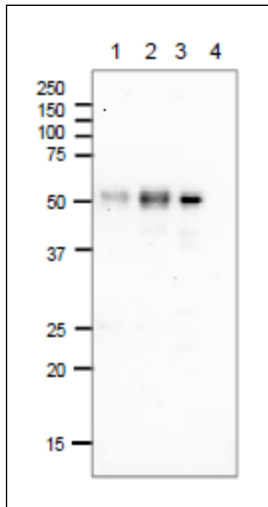


**Fig.1 Western blot of *E. coli* photolyase**

1. Purified Photolyase 8.4 ng
2. Purified Photolyase 42 ng
3. *E. coli* crude lysate, 40 µg

SDS-PAGE 12.5% gel. Blotting: 15 v, overnight, Blocking by 5% skim milk. Anti-Photolyase antibody used at 1/1,000 dilution. 2<sup>nd</sup> antibody: Goat anti-rabbit IgG (H & L) (ab97051) used at 1/10,000.

Note that there are only 10-20 molecules of photolyase per *E. coli* cell.



**Fig 2 Immunoprecipitation of E. coli Photolyase**

Immunoprecipitation was performed by using Dynabeads Magnetic system (Thermo Fisher).

1. E. coli AB1157 cell lysate (300  $\mu$ g), antibody 2  $\mu$ g
2. E. coli AB1157 cell lysate (300  $\mu$ g), antibody 10  $\mu$ g
3. Positive control: E. coli Photolyase purified, 4.2  $\mu$ g, antibody 10  $\mu$ g
4. Negative control: No sample, antibody 10  $\mu$ g

Western blot: Anti-Photolyase antibody used at 1/1,000 dilution and as the second antibody, HRP-conjugated goat anti-rabbit IgG VeriBlot for IP (ab131366) was used at 1/1,000 dilution.

#### Related Product

01-013. E. coli DNA Photolyase (Cyclobutane Pyrimidine Dimer Photolyase)