



Lambda Gamma Protein

Catalog #:	Package Size	Concentration
3617	100 µl (100 µg)	1 µg/µl
3619	500 µl (500 µg)	1 µg/µl

Description

The Red system of bacteriophage λ consists of three proteins that promote DNA recombination initiated at dsDNA breaks or at the overlapping ends of the linear λ chromosome (1). The *exo* gene (*red α*) encodes λ exonuclease, a 24-kDa protein with 5' \rightarrow 3' exonuclease activity (2). The *bet* gene (*red β*) encodes the 29-kDa β protein, which binds ssDNA and promotes annealing of complementary strands (3). The *gam* gene (*red γ*) encodes the 16-kDa γ protein, which binds and inhibits host nuclease enzymes (4).

Applications

- Bind to the host RecBCD protein and inhibits host nuclease enzymes

Quality Control

Quality control is performed following the production of each new lot of product to ensure that it meets the quality standards and specifications designated for the product. Each lot is repeatedly compared side-by-side with leading competitors to ensure our products outperform the competitor before product launching.

Lambda gamma is free from detectable nuclease and RNase activities.

Protein purity

The physical purity of this enzyme is $\geq 99\%$ as assessed by SDS-PAGE with Coomassie® blue staining (see figure below).

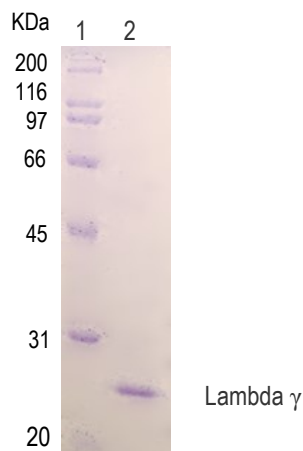


Fig: Lane 1, Protein marker
Lane 2, Lambda gamma

Source

E. coli cells carrying λ *red γ* gene.

Contents & Storage

- Lambda Gamma
- 10x Lambda Gamma reaction buffer

Store all contents at $-20\text{ }^{\circ}\text{C}$.

10x Lambda gamma reaction buffer

670 mM Glycine-KOH

25 mM MgCl₂

500 µg/ml BSA

pH 9.4 @ 25°C.

Storage Buffer

50 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM β -mercaptoethanol, 1 mM DTT and 50% (v/v) glycerol.

Inactivation

Inactivated by heating at 70°C for 20 min.

References

1. Poteete AR. FEMS Microbiol Lett 2001; 201:9 -14.
2. Little, J.W. (1981). Gene Ampli. Anal. 2, 135-145.
3. Kmiec E, Holloman WK. J Biol Chem 1981; 256:12636 -12639.
4. Marsic N, Roje S, Stojiljkovic I, Salaj-Smic E, Trgovcevic Z. J Bacteriol 1993;175:4738 -4743.