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Certificate of Analysis

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Rec A Protein

Catalog No: 1370

Lot No: See Product Label

Package Size: See Product Label

Concentration: See Product Label

Storage Conditions: Store at -20°C

Description

- A 37,8 kDa protein encoded by the recA gene of E coli
- Involved in DNA renaturation and rare cleavage of genomic DNA
- Ultrapure recombinant protein

Applications

- Regulates repair mechanisms and repairs DNA (1, 2)
- Binds cooperatively and stoichiometrically to single-stranded DNA
- In presence of ATP-g-S, locates and pairs a single-stranded DNA sequence to its homologous double-stranded DNA
- Cleaves large fragments of DNA (RARE-Rec A Assisted Restriction Endonuclease) (3)
- Enhances contrast of electron micrography when DNA is coated with Rec A Protein (4)

Storage Buffer

20 mM Tris-HCl (pH 7.5 at 4°C)
0.1 mM EDTA
1 mM dithiothreitol
50% (v/v) glycerol.

Quality Control

DNase, double-stranded: Incubation of 5, 10, and 20 µg of protein with 0.015 µg of [³²P] lambda DNA for 1 hour at 37°C resulted in the release of ≤1.0 slope of %-end label released per µg of protein. Reaction volume of 20 µl.

DNase, single-stranded: Incubation of 5, 10, and 20 µg of protein with 0.015 µg of [³²P] lambda DNA for 1 hour at 37°C resulted in the release of ≤1.0 slope of %-end label released per µg of protein. Reaction volume of 20 µl.

Nicking: Incubation of 5, 10, and 20 µg of protein with 1.0 µg of pBR322 DNA at 37°C for 1 hour resulted in ≤5% conversion of RF I to RF II DNA. Reaction volume of 50 µl.

Purity: > 95% pure, as judged by SDS-polyacrylamide gel electrophoresis.

References

(1) Clark, A.J. and Margulies, A.D. (1965) *Proc. Natl. Acad. Sci. U.S.A.* 53, 451-459 (2) Radding, C.M. (1978) *Annu. Rev. Biochem.* 47, 847-880 (3) Koob, M., Burkiewicz, A., Kur, J. and Szybalski, W. (1992) *Nucleic Acids Res.* 20, 5831-5836 (4) Krasnow, M. A. et al. (1983) *Nature* 304, 559

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