

ORDERING INFORMATION

CAT. No.	SIZE	PACKAGE CONTENT
BR1500101	10000 Units	100 μl LYO-ready Exonuclease III, 100 U/μl 1.5 ml 10X Exo-III Reaction Buffer
BR1500102	25000 Units	250 μl LYO-ready Exonuclease III, 100 U/μl 1.5 ml 10X Exo-III Reaction Buffer
BR1500103	100000 Units	1000 μl LYO-ready Exonuclease III, 100 U/μl 1.5 ml 10X Exo-III Reaction Buffer

DESCRIPTION

biotechrabbit™ LYO-ready Exonuclease III is a highly processive Exonuclease that can continuously remove multiple nucleotides without dissociating from the DNA strand. This 31 kDa enzyme removes nucleotides from the 3' end of double-stranded DNA in a stepwise manner, and continues to move in the 3' → 5' direction. In contrast to other exonucleases that operate sequentially at one site, Exonuclease III exhibits the ability to simultaneously target multiple DNA molecules or multiple sites within a single DNA molecule. This capability enables the enzyme to rapidly and cooperatively remove nucleotides from DNA strands. In addition to its exonuclease activity, the enzyme also exhibits RNase H, 3'-DNA phosphatase, and apurinic DNA endonuclease activities. This enzymatic activity finds practical applications in DNA sequencing, removal of unwanted DNA sequences, and the creation of precise DNA fragments for genetic engineering. biotechrabbit™ LYO-ready Exonuclease III is provided in a storage buffer containing 5% glycerol, making it suitable for further use in lyophilization.

APPLICATIONS

- Recombinase Polymerase Amplification (RPA)
- Other isothermal amplification techniques (e.g., RCA)
- Cloning of PCR products
- Unidirectional nested deletions (3' → 5' exonuclease activity)
- Generation of a single-stranded template for dideoxy sequencing of DNA
- Production of intermediate products for site-directed mutagenesis
- Preparation of strand-specific probes

REAGENTS SUPPLIED WITH THE ENZYME

10X Exo-III Reaction Buffer (K00631)

HEAT INACTIVATION

70 °C for 20 minutes

STORAGE

Store at –20 °C until expiry date.

STORAGE BUFFER COMPOSITION

50 mM Tris-HCl, 50 mM KCl, 0.1 mM EDTA, 5% Glycerol, 1 mM DTT - pH 7.5 at 25 °C

Unit Definition

One unit is defined as the amount of enzyme required to produce 1 nmol of acid-soluble total nucleotide in 30 minutes at 37 °C.

PURITY

SDS-PAGE followed by Coomassie® blue staining confirms the purity of the enzyme (Fig. 1). The physical purity of Exonuclease III is ≥ 95 %.

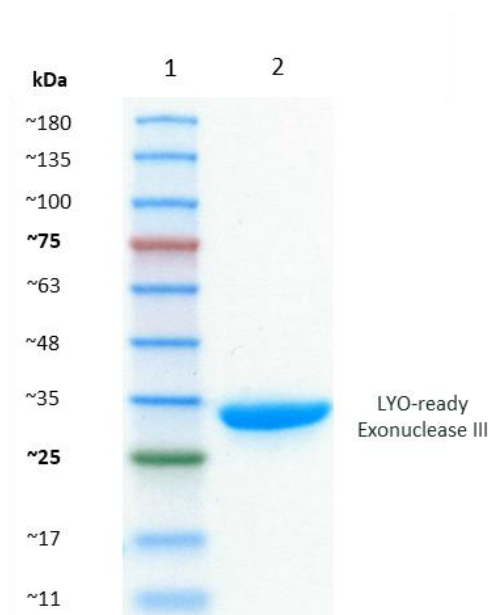


Fig. 1
Lane 1, , TriColor Protein Ladder
(10-180 kDa), BR0900201
Lane 2, LYO-ready Exonuclease III

RELATED PRODUCTS

BR15004XX:

LYO-ready RB69 Gene 32 Protein, 10 mg/ml

BR15003XX:

LYO-ready T4 UvsY Protein, 2 mg/ml

BR15002XX:

LYO-ready T6 UvsX DNA Recombinase, 5 mg/ml

BR15005XX:

LYO-ready T4 Gene 32 Protein, 10 mg/ml

SAFETY INSTRUCTIONS

For safety instructions please see Safety Data Sheets (SDS)
Sicherheitshinweise finden Sie in den
Sicherheitsdatenblättern (SDB) unter
www.biotechrabbit.com/support/documentation.html

USEFUL HINTS

- Visit Applications at www.biotechrabbit.com for more products and product selection guides.
- Most biotechrabbit products are available in custom formulations and bulk amounts.
- In case any customization is required, please contact biotechrabbit via oem@biotechrabbit.com.

CONTACT BIOTECHRABBIT

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For Research Use Only. biotechrabbit does not assume any warranty regarding the design, merchantability or fitness for a particular purpose of the product, especially, but not limited to, for any in vitro diagnostic or other usages of the products. It is the sole responsibility of the customer to obtain the required approvals from the competent authorities. The product is not suitable for administration to humans or animals.

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