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New England Biolabs Product Specification

Product Name: AatII

Catalog #: R0117S/L/V
Concentration: 20,000 units/ml

Unit Definition:

One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction

volume of 50 µl.

Shelf Life: 24 months
Storage Temp: -20°C

Storage Conditions: 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA

Specification Version: PS-R0117S/L v1.0
Effective Date: 08/07/2013

Assay Name/Specification (minimum release criteria)

Blue-White Screening (Terminal Integrity) - A sample of pUC19 vector linearized with a 10-fold excess of AatII, religated and transformed into an *E. coli* strain expressing the LacZ beta fragment gene results in <1% white colonies.

Endonuclease Activity (Nicking) - A 50 μ l reaction in CutSmartTM Buffer containing 1 μ g of supercoiled Litmus38i DNA and a minimum of 20 Units of AatII incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Exonuclease Activity (Radioactivity Release) - A 50 μl reaction in CutSmartTM Buffer containing 1 μg of a mixture of single and double-stranded [³H] *E. coli* DNA and a minimum of 60 units of AatII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

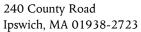
Ligation and Recutting (Terminal Integrity) - After a 10-fold over-digestion of Lambda DNA with AatII, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with AatII.

Non-Specific DNase Activity (16 Hour) - A 50 μ l reaction in CutSmartTM Buffer containing 1 μ g of Lambda DNA and a minimum of 60 Units of AatII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

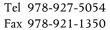




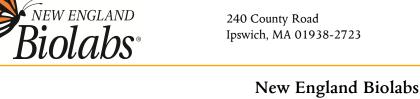




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08/07/2013 Date

Derek Robinson Quality Approver





