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## Certificate of Analysis

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### Rsa I

Catalog No: 2340

**Lot No:** See Product Label

**Package Size:** See Product Label

**Concentration:** See Product Label

**Source:** *Rhodopseudomonas sphaeroides*

**Storage Conditions:** Store at -20°C

#### Recognition/Cut Site

5'-GT↓AC-3'

3'-CA↑TG-5'

#### Unit Definition

One unit is the amount of enzyme required to completely digest 1 µg Lambda DNA in 1 hour in a total reaction volume of 50 µl.

#### Reaction Temperature

37°C

#### Heat Inactivation

10 minutes at 65°C

#### Assay Conditions

50 mM Tris-HCl (pH 8.0)

10 mM MgCl<sub>2</sub>

1 µg Lambda DNA

Incubation is at 37°C for 1 hour in a reaction volume of 50 µl

#### Storage Buffer

10 mM Tris-HCl (pH 7.4)

50 mM KCl

0.1 mM EDTA

1 mM DTT

1.0 mg/ml Bovine Serum Albumin

0.1 M PMSF

50% (v/v) Glycerol

#### Quality Control

**Endonuclease:** Incubation of 20, 35, and 50 units of Rsa I with 1 µg of Lambda DNA at 37°C for 5 hours (a 250-fold over-digestion) resulted in the same sharp characteristic banding pattern as 4 U/µg in the standard assay reaction, as determined by agarose gel electrophoresis. A second incubation using pBR322 DNA as the DNA substrate resulted in the same sharp characteristic banding pattern as 4 U/µg in the standard 1 hour assay reaction, as determined by agarose gel electrophoresis

**3'-Exonuclease:** Incubation of 5, 10, 20, and 30 units of Rsa I with 5 pmoles of 3'-ends of lambda/Taq I fragments (3'-labeled with T4 DNA Polymerase and [<sup>3</sup>H]dCTP), incubated for 1 hour at 37°C resulted in a ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

**5'-Exonuclease:** Incubation of 5, 10, 20, and 30 units of Rsa I with 0.25 µg of 5'-ends of [5'-<sup>32</sup>P]lambda/Hae III fragments for 1 hour at 37°C resulted in a ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

**Ligation:** Incubation of 4 units of Rsa I with 1 µg of Lambda DNA at 37°C produces fragments that ligate with ≥65% efficiency. The recut efficiency of these ligated fragments is 100%.

*For more information or to re-order, please visit [www.chimerx.com](http://www.chimerx.com)*