



6143 North 60th Street  
Milwaukee, WI 53218  
[www.chimerx.com](http://www.chimerx.com)

## Certificate of Analysis

Telephone: (414) 535-9506  
Toll Free: (800) 626-7833  
Fax: (414) 535-9508  
Web Support: [chimerx.com/support](http://chimerx.com/support)  
Email: [info@chimerx.com](mailto:info@chimerx.com)

## Kpn I

Catalog No: 2280

**Lot No:** See Product Label

**Package Size:** See Product Label

**Concentration:** See Product Label

**Source:** Klebsiella pneumonia OK8

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

### Recognition/Cut Site

5'-GGTAC↓C-3'

3'-C↑CATGG-5'

### Unit Definition

One unit is the amount of enzyme required to completely digest 1 µg of Ad-2 DNA in 1 hour in a total reaction volume of 50 µl.

### Reaction Temperature

37°C

### Heat Inactivation

No

### Assay Conditions

20 mM Tris-HCl (pH 7.4)

5 mM MgCl<sub>2</sub>

50 mM KCl

1 µg of Ad-2 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)

0.1mM EDTA

200mM KCl

1mM DTT

0.05% (v/v) TWEEN-20

50% (w/v) Glycerol

500 µg/ml BSA

### Quality Control

**Non-specific Endonuclease:** Incubation of 10, 20, and 30 units of Kpn I with 1 µg of Ad-2 DNA at 37°C for 5 hours (a 150-fold over-digestion) resulted in the same sharp characteristic banding pattern as 4 units of Kpn I with 1 µg of Ad-2 DNA at 37°C for 1 hour. Results determined by agarose gel electrophoresis. Reaction volume of 50 µl.

**Non-specific Endonuclease:** Incubation of 10, 20, and 30 units of Kpn I with 1 µg of SV40 DNA at 37°C for 5 hours (a 150-fold over-digestion) resulted in the same sharp characteristic banding pattern as 4 units of Kpn I with 1 µg of SV40 DNA at 37°C for 1 hour. Results determined by agarose gel electrophoresis. Reaction volume of 50 µl.

**Nicking:** Incubation of 10, 20, and 30 units of Kpn I with 1 µg of φX-174 DNA at 37°C for 5 hours (a 150-fold over-digestion) resulted in ≤40% conversion of RF I to Form II and ≤5% conversion to Form III, as determined by agarose gel electrophoresis. Reaction volume of 50 µl.

**3'-Exonuclease:** Incubation of 2, 5, 10, 15, and 20 units of Kpn I and 5 pmoles of 3'-ends of lambda/Taq I fragments (3'-labelled with Klenow and [<sup>3</sup>H]dCTP), incubated for 1 hour at 37°C resulted in ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

**5'-Exonuclease/5'-Phosphatase:** Incubation of 2, 5, 10, 15, and 20 units of Kpn I with 0.25 µg 5'-ends of [5'-<sup>32</sup>P]lambda/Hae III fragments for 1 hour at 37°C resulted in ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

**Ligation/Recut:** Incubation of 2 units of Kpn I with 1 µg of Ad-2 DNA at 37°C produces fragments that ligate with > 95% 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)