BIOTOOLS B&M LABS.S.A.
C/ Valle de Tobalina, 52 - Nave 39 E-28021 Madrid (Spain)
Tel: (34) 91 710 00 74 Fax: (34) 91 505 31 18
e-mail: info@biotools.eu www.biotools.eu

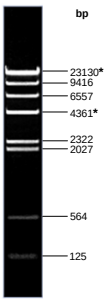
# Lambda DNA/HindIII Marker

## (Ref. 31.011)

**Concentration: 0.5 mg/ml (50 μg)** **Store at -20ºC**

## Description

The Lambda DNA is completely digested with HindIII to yield bands ranging from 0.125 kb to 23 kb, suitable for use as molecular weight standards for agarose gels. The marker is composed to 8 purified individual DNA fragments (in base pairs): 23130*, 9416, 6557, 4361*, 2322, 2027, 564 and 125.




**Lambda DNA/HindIII Marker**
0.5μg/lane
1% agarose gel
stained with ethidium bromide

**Note:** *The cohesive ends of the 12nt *cos* site of bacteriophage lambda from fragments of 23130 bp and 4361 bp (indicated*) may anneal and form an additional band at 27491 bp. These fragments may be separated by heating at 65 °C for 5 min and then cooling on ice for 3 min.

## Storage buffer (TE buffer)

10 mM Tris-HCl (pH 7.6), 1 mM EDTA

## Storage temperature

Store at -20ºC. For frequent use divide in aliquots to avoid multiple freeze/thaw cycles, or store at 4ºC in the presence of loading buffer.

## Protocol

1- Prepare loading mixture (for the 5 mm gel lane[+]):

- Lambda DNA/HindIII Marker 1 µl (0.5 µg)
- 5X Loading Dye 1 µl
- Distilled water 3 µl

2- Mix gently

**3- Heat for 5 min at 65 °C and then cool on ice for 3 min***

4- Load onto the gel

5- Visualise DNA by staining with ethidium bromide or with SYBR® Green I

[+]The mixture should be scaled up or down, depending on the width of the gel. Use 0.1 µg of DNA marker/mm of lane.

The Lambda DNA/HindIII Marker was not designed for precise quantification of DNA mass, but can be used for semi-quantification (see Table 1). For quantification, adjust the concentration of the sample to equalize it approximately with the amount of DNA in the nearest band of the ladder.

**Table 1.** Percentage and mass of individual fragments (for 0.5 µg Lambda DNA/HindIII Marker)

| Fragment | Size | % | mass (ng/0.5µg) |
|---|---|---|---|
| 1 | 23130 | 47.7 | 238.4 |
| 2 | 9416 | 19.4 | 97.1 |
| 3 | 6557 | 13.5 | 67.6 |
| 4 | 4361 | 9.0 | 45.0 |
| 5 | 2322 | 4.8 | 23.9 |
| 6 | 2027 | 4.2 | 20.9 |
| 7 | 564 | 1.2 | 5.8 |
| 8 | 125 | 0.3 | 1.3 |

**Notice to users**

Research and *in vitro* use only.

Ed. 08 – February 19