

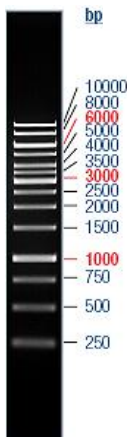
## 1 kb DNA Ladder (Ref. 31.005)

Concentration: 0.5 µg/ml (50 µg)

Store at -20°C

### Description

The 1 kb DNA Ladder is prepared from vector DNA digested to completion with appropriate restriction enzymes to yield bands ranging from 250 bp to 10 kb, suitable for use as molecular weight standards for agarose gel electrophoresis. The ladder is composed to 14 chromatography-purified individual DNA fragments (in base pairs): 10000, 8000, **6000**, 5000, 4000, 3500, **3000**, 2500, 2000, 1500, **1000**, 750, 500 and 250. The 1000, 3000 and 6000 bp fragments have increased intensity to serve as reference bands.



**1kb DNA Ladder**  
0.5µg/lane  
1% agarose gel  
stained with ethidium bromide.

### Storage buffer (TE buffer)

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

## Storage temperature

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

## Protocol

1- Prepare loading mixture (for the 5 mm gel lane\*):

- 1kb DNA Ladder 1 µl (0.5 µg)
- 5X Loading Dye 1 µl
- Distilled water 3 µl

2- Mix gently

### 3- Do not heat

4- Load onto the agarose 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 agarose gel. Use 0.1µg of DNA ladder/mm of lane.

The 1kb DNA Ladder 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 1 kb DNA Ladder)

Fragment	Size	%	mass (ng/0.5µg)
1	10000	6	30
2	8000	6	30
<b>3</b>	<b>6000</b>	<b>14</b>	<b>70</b>
4	5000	6	30
5	4000	6	30
6	3500	6	30
<b>7</b>	<b>3000</b>	<b>14</b>	<b>70</b>
8	2500	5	25
9	2000	5	25
10	1500	5	25
<b>11</b>	<b>1000</b>	<b>12</b>	<b>60</b>
12	750	5	25
13	500	5	25
14	250	5	25

## Notice to users

Research and *in vitro* use only.