

DNA and DNA Molecular Weight Markers

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DNA and DNA Molecular Weight Markers

Phage Lambda DNA

Description:

Phage Lambda cl857 Sam7 DNA is isolated from an infected *E. coli* strain W3350. Restriction enzyme-digested Lambda DNA (48502 bp) generates Molecular Weight Size Markers routinely used in gel analysis of nucleic acids. The complete nucleotide sequence has been determined (1,2).

Concentration: 0.2-0.5mg/ml

Phage Lambda DNA

Cat#	Pack size
301005	0.05 mg
301025	0.25 mg
301100	1 mg

Storage Buffer:

10mM Tris-HCl (pH 7.8), 10mM NaCl, 1mM EDTA.

Storage Conditions: -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6µg per lane.

References:

1. Sanger, F. et al. (1982) *J. Mol. Biol.* **162**, 729.
2. MEDLINE [83189071](#), PUBMED [6221115](#).

Phage Lambda DNA dam-, dcm-

Description:

Phage Lambda cl857 Sam7 DNA is isolated from infected *E. coli* strain deficient in adenine and cytosine methylases (dam-dcm-). Restriction endonucleases that are sensitive to dam and/or dcm methylation give complete digests on this DNA.

Concentration: 0.2-0.5mg/ml

Phage Lambda DNA dam-, dcm-

Cat#	Pack size
313005	0.05 mg
313025	0.25 mg
313100	1 mg

Storage Buffer:

10mM Tris-HCl (pH 7.8), 10mM NaCl, 1mM EDTA.

Storage Conditions: -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6µg per lane.

Phage T7 DNA

Description:

Bacteriophage T7 DNA is isolated from an infected *E. coli* strain. DNA is linear and 39937 bp long. Some restriction enzymes have no recognition sequences on Lambda DNA, therefore these enzymes are to be analyzed on the other DNA substrate. T7 DNA is the most popular "alternative" to Phage Lambda DNA substrate for the restriction endonucleases. The complete nucleotide sequence has been determined (1,2).

Concentration: 0.2-0.5mg/ml

Phage T7 DNA

Cat#	Pack size
310005	0.05 mg
310025	0.25 mg

Storage Buffer:

10mM Tris-HCl (pH 7.8), 10mM NaCl, 1mM EDTA.

Storage Conditions: -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6 µg per lane.

Reference:

1. Dunn, J.J. and Studier, F.W. (1983) Complete nucleotide sequence of bacteriophage T7 DNA and the locations of T7 genetic elements, *J. Mol. Biol.* **166** (4), 477-535.
2. MEDLINE [83241725](#), PUBMED [6864790](#).



100 bp DNA Ladder

Description:

100 bp DNA Ladder is ideal for determining the size of double-stranded DNA from 100 to 1000 base pairs. The ladder consists of eleven fragments that range in size from 100 to 1000 bp in 100 bp increments. The 500 bp fragment is present at increased intensity to allow easy identification. All fragments are blunt-ended.

Concentration: 0.2 mg/ml

Fragment sizes (Base Pairs):

1000, 900, 800, 700, 600, 500(x2), 400, 300, 200, 100

Number of Bands: 10.

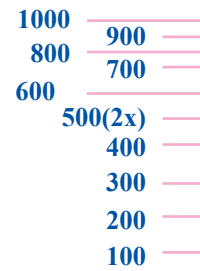
Storage Buffer:

10 mM Tris-HCl (pH 7.8), 10 mM NaCl, 1 mM EDTA.

Storage Conditions: -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4- 0.6 µg per lane.



1.7% agarose

bp

100 bp DNA Ladder

Cat#	Pack size
304005	0.05 mg
304025	0.25 mg

100 bp plus DNA Ladder

Description:

100 bp plus DNA Ladder is ideal for determining the size of double-stranded DNA from 100 to 1500 base pairs. The ladder consists of ten fragments that range in size from 100 to 1000 bp in 100bp increments plus 1500 bp fragment. The 500 and the 1000 bp fragments are present at increased intensity to allow easy identification. All fragments are blunt-ended.

Concentration: 0.2 mg/ml

100 bp plus DNA Ladder

Cat#	Pack size
306005	0.05 mg
306025	0.25 mg

Fragments sizes (Base Pairs):

1500, 1000x2, 900, 800, 700, 600, 500x3, 400, 300, 200, 100.

Number of Bands: 11.

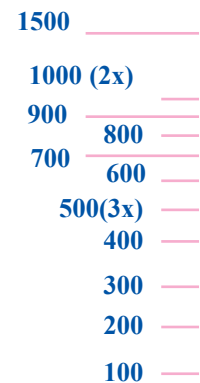
Storage Buffer:

10mM TrisHCl (pH 8.0), 1.0 mM EDTA.

Storage Conditions: -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6 µg (2-3 µl) per lane.



1.7% agarose

bp

1kb DNA Ladder

Description:

1 kb DNA Ladder is a convenient marker for determining the size of double-stranded DNA from 250 to 10000 base pairs. The ladder consists of 13 fragments that range in size from 250 to 10000 base pairs. The 3000, 1000 and 500 bp fragments possess increased intensity compared to the other bands on ethidium bromide-stained agarose gels and serve as reference indicators. All fragments are blunt-ended.

Concentration: 0.2 mg/ml

1kb DNA Ladder

Cat#	Pack size
305005	0.05 mg
305025	0.25 mg

Fragments sizes (kb):

10.0, 8.0, 6.0, 5.0, 4.0, 3.0 (2x), 2.5, 2.0, 1.5, 1.0 (2x), 0.75, 0.5 (2x), 0.25.

Number of Bands: 13.

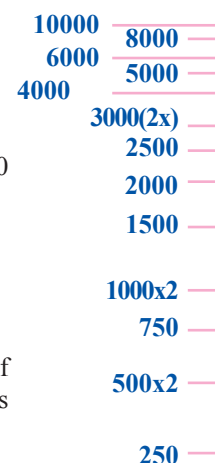
Storage buffer:

10 mM TrisHCl (pH 7.8), 1.0 mM EDTA.

Storage Conditons: -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4 -0.6 µg per lane.

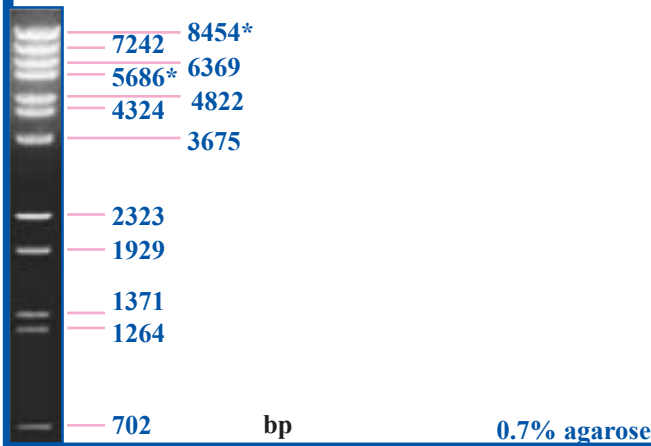


1% agarose

bp

DNA and DNA Molecular Weight Markers

Phage Lambda DNA/BstE II Marker



Phage Lambda DNA/BstE II Marker

Cat#	Pack size
303005	0.05 mg
303025	0.25 mg

Description:

Phage Lambda (cI857 Sam 7)DNA/BstE II is prepared by digesting Lambda DNA with BstEII, followed by inactivation of the enzyme. The DNA fragments are then ethanol-precipitated and resuspended in storage buffer.

Concentration: 0.2-0.5 mg/ml.

Fragment sizes (Base Pairs):

8454*, 7242, 6369, 5686*, 4822, 4324, 3675, 2323, 1929, 1371, 1264, 702, 224, 117.

Number of Bands: 14.

Storage Buffer:

10 mM Tris-HCl (pH 8.0), 1 mM EDTA

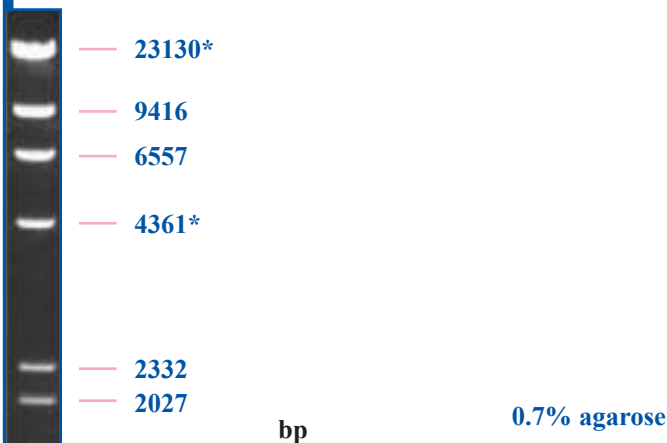
Storage: -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6 µg per lane.

Attention! The cohesive ends of fragments 1 and 4 (marked by *) may cause formation of extra band 14140 bp. The fragments can be separated by heating to 65°C for 3 minutes before loading the sample on the gel.

Phage Lambda DNA/Hind III Marker



Phage Lambda DNA/Hind III Marker

Cat#	Pack size
302005	0.05 mg
302025	0.25 mg

Attention! The cohesive ends of fragments 1 and 4 (marked by *) may cause formation of extra band 27491 bp. The fragments may be separated by heating to 65°C for 3 minutes before loading the sample on the gel.

Description:

Lambda DNA (cI857 Sam 7)/Hind III Markers are prepared by digesting Lambda DNA with Hind III, followed by heat-inactivation of the enzyme. The DNA fragments are then ethanol-precipitated and resuspended in the storage buffer.

Concentration: 0.2-0.5 mg/ml.

Fragments (Base Pairs):

23130*, 9416; 6557; 4361*; 2322; 2027; 564, 125.

Number of Bands: 8.

Storage Buffer:

10 mM Tris-HCl (pH 8.0), 1 mM EDTA.

Storage Conditions: -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6 µg per lane.

Phage Lambda DNA/Sty I Marker

Description:

Lambda DNA (cI857 Sam 7)/Sty I Marker is prepared by digesting Lambda DNA with Sty I, followed by inactivation of the enzyme. The DNA fragments are then ethanol-precipitated and resuspended in storage buffer.

Concentration: 0.2-0.5mg/ml.

Fragments (Base Pairs):

19329*; 7743; 6223; 4254*; 3472; 2690; 1882, 1489; 925; 421; 74.

Number of Bands: 11.

Storage Buffer:

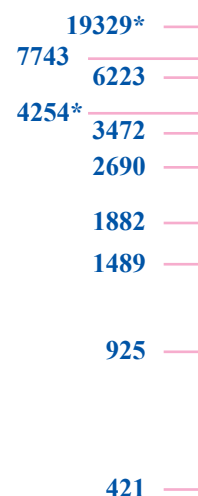
10mM Tris-HCl (pH 8.0), 1mM EDTA.

Storage: Store at -20°C.

Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6µg per lane.

Attention! The cohesive ends of fragments 1 and 4 (marked by *) may cause formation of extra band 23583 bp. The fragments can be separated by heating to 65°C for 3 minutes before loading the sample on the gel.



1.7% agarose bp

Phage Lambda DNA/StyI Marker

Cat#	Pack size
307005	0.05 mg
307025	0.25 mg

pUC19 Plasmid DNA

Description:

pUC19 is a commonly used *E.coli* plasmid cloning vector. The molecule is a double-stranded circle of 2686 base pairs in length. pUC19 carries a multiple cloning site polylinker that contains unique sites for 13 different restriction endonucleases (6-cutters). The complete nucleotide sequence has been determined (1.2).

Concentration: 0.2-0.5mg/ml

Storage Buffer:

10mM Tris-HCl (pH 7.8), 10mM NaCl, 1mM EDTA.

Loading:

The recommended amount of size marker to load on the gel is 0.4 -0.6 µg per lane.

References:

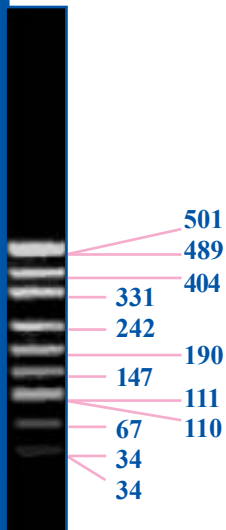
1. Yanisch-Perron, C., Vieira, J. and Messing, J. (1985) Gene 33, 103-119.
2. ACCESSION L09137 X02514, MEDLINE [85180545](#), PUBMED [2985470](#).

pUC19 Plasmid DNA

Cat#	Pack size
309005	0.05 mg
309025	0.25 mg

DNA and DNA Molecular Weight Markers

pUC19/MspI DNA Marker



Description:

Msp I digest of pUC19 plasmid yields 12 fragments.

Concentration: 0.2-0.5mg/ml

Fragments sizes (Base Pairs):

501, 489, 404, 331, 242, 190, 147, 111, 110, 67, 34(2x), 26.

Number of Bands: 12.

Storage Buffer:

0.2-0.5mg/ml in 10mM Tris-HCl (pH 7.8), 10mM NaCl, 1mM EDTA.

Storage Conditions: -20°C.

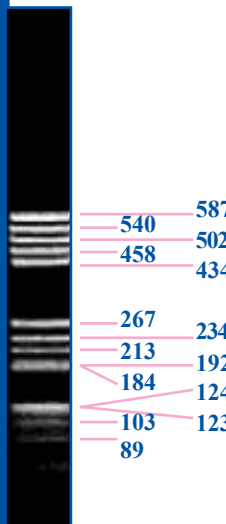
Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6 µg per lane.

pUC19/Msp I DNA Marker

Cat#	Pack size
311005	0.05 mg
311025	0.25 mg

pBR322/HaeIII Marker DNA



Description:

pBR322 digest of pBR322 plasmid yields 22 fragments.

Concentration: 0.2-0.5mg/ml

Fragments sizes (Base Pairs):

587, 540, 502, 458, 434, 267, 234, 213, 192, 184, 124, 123, 104, 89, 80, 64, 57, 51, 21, 18, 11, 8.

Number of Bands: 14.

Storage Buffer:

10mM Tris-HCl (pH 7.8), 10mM NaCl, 1mM EDTA.

Storage Conditions: -20°C

Loading:

The recommended amount of size marker to load on the gel is 0.4 - 0.6 µg per lane.

pBR322/HaeIII Marker DNA

Cat#	Pack size
312005	0.05 mg
312025	0.25 mg

(6X) Loading Buffer DNA II

Composition:

Bromphenol blue sodium Salt: 0,25%
Xylene cyanol FF: 0,25%
Ficoll 400: 15%

Storage Conditions: Roomtemperature.

Loading Buffer DNA II

Cat#	Pack size
306205	0.5 ml

How to predilute a DNA ladder with the loading dye?

for example: 5µl 1 kb ladder : 5µl 6x loading dye II : 20µl water. (ratio: 1:1:4)

(10X) Loading Buffer DNA IV

Composition:

Bromphenol blue: 0,25%
Xylene cyanol FF: 0,25%
EDTA Na₂ (pH 8,0): 100mM
Ficoll 400: 20 %
SDS: 1,0%

Storage Conditions: Roomtemperature.

Loading Buffer DNA IV

Cat#	Pack size
306105	0.5 ml

