
EZ Load™ Molecular Rulers

Catalog Numbers

170-8351	20 bp
170-8352	100 bp
170-8353	100 bp PCR
170-8354	500 bp
170-8355	1 kb
170-8356	Precision Mass



EZ Load Molecular Rulers

Quantity	DNA sufficient for 100 lanes when used at 5 μ l per lane.
Storage	Should be stored at 4 °C. Use only sterile pipet tips when removing aliquots. Introduction of nucleases will shorten shelf life.
Shipping	Shipped at room temperature.
Shelf Life	Stable for 1 year when stored at 4 °C.

5x Nucleic Acid Sample Loading Buffer

Quantity	1 ml
Storage	Should be stored at room temperature. Use only sterile pipet tips when removing aliquots.
Shipping	Shipped at room temperature.
Shelf Life	Stable for 1 year when stored at room temperature.
Concentration	25% glycerol, 50 mM Tris pH 8.0, 5 mM EDTA, 0.2% bromophenol blue, 0.2% xylene cyanole FF.
Use	Typically, 1 μ l of 5x nucleic acid sample loading buffer is needed for every 4 μ l of sample.

EZ Load 20 bp Molecular Ruler

Catalog Number 170-8351

Use	Load 5 μ l per lane. This loading translates into 500 ng of DNA per lane. Adjustments may be made to the loading volume for different well sizes and desired band intensity. The EZ Load 20 bp PCR molecular ruler can be resolved in 1.5–2.5% standard agarose gels, Amplisize agarose gels up to 4%, and polyacrylamide gels up to 8%.
Contents	1 vial EZ Load 20 bp molecular ruler, 500 μ l supplied in 5% glycerol, 15 mM Tris pH 8.0, 1.5 mM EDTA, 0.04% bromophenol blue, 0.04% xylene cyanole FF.
Concentration	100 μ g/ml
Size	50 bands: 20–1,000 bp in exact 20 bp increments. A visually distinct reference band at 200 bp contains three times the concentration of material found in the other bands.
Please note	The EZ Load 20 bp molecular ruler does not always resolve well in gels made of pure NuSieve GTG. Use Bio-Rad Amplisize Agarose, or the recommended mixture of 3:1 NuSieve GTG: standard agarose.

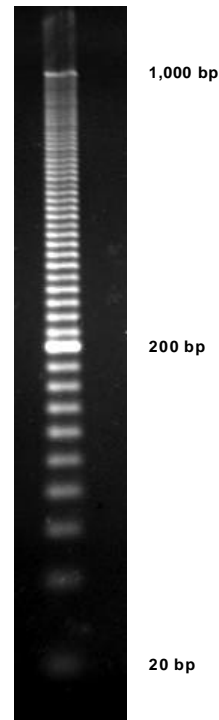


Fig. 1. 5 μ l of the EZ Load 20 bp molecular ruler was loaded onto a 2.5% Amplisize agarose gel. The gel was run at 140 V for 3 hours in 1x TBE buffer. The gel was stained in EtBr for 15 minutes and destained in d_2O for 30 minutes.

EZ Load 100 bp Molecular Ruler

Catalog Number 170-8352

Use	Load 5 μ l per lane. This loading translates into 250 ng of DNA per lane. Adjustments may be made to the loading volume for different well sizes and desired band intensity. The EZ Load 100 bp molecular ruler can be resolved in 1–2.5% agarose gels and polyacrylamide gels up to 8%.
Contents	1 vial EZ Load 100 bp molecular ruler, 500 μ l supplied in 5% glycerol, 15 mM Tris pH 8.0, 1.5 mM EDTA, 0.04% bromophenol blue, 0.04% xylene cyanole FF.
Concentration	50 μ g/ml
Size	10 bands: 100–1,000 bp in exact 100 bp increments.
Please note	The EZ Load 100 bp molecular ruler may show a double- or triple-banding pattern in polyacrylamide gels.

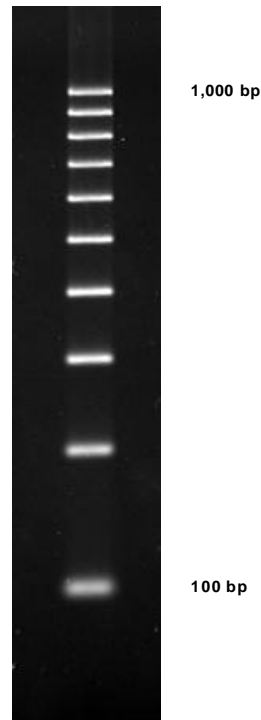


Fig. 2. 5 μ l of the EZ Load 100 bp molecular ruler was loaded onto a 2.5% Amplisize agarose gel. The gel was run at 140 V for 3 hours in 1x TBE buffer. The gel was stained in EtBr for 15 minutes and destained in dH₂O for 30 minutes.

EZ Load 100 bp PCR Molecular Ruler

Catalog Number 170-8353

Use	Load 5 μ l per lane. This loading translates into 400 ng of DNA per lane. Adjustments may be made to the loading volume for different well sizes and desired band intensity. The EZ Load 100 bp PCR molecular ruler can be resolved in 0.8–2% agarose gels and polyacrylamide gels of 5%.
Contents	1 vial EZ Load 100 bp PCR molecular ruler, 500 μ l supplied in 5% glycerol, 15 mM Tris pH 8.0, 1.5 mM EDTA, 0.04% bromophenol blue, 0.04% xylene cyanole FF.
Concentration	80 μ g/ml
Size	30 bands: 100–3,000 bp in exact 100 bp increments. Two visually distinct reference bands at 1 kb and 3 kb contain three times the concentration of material found in the other bands.

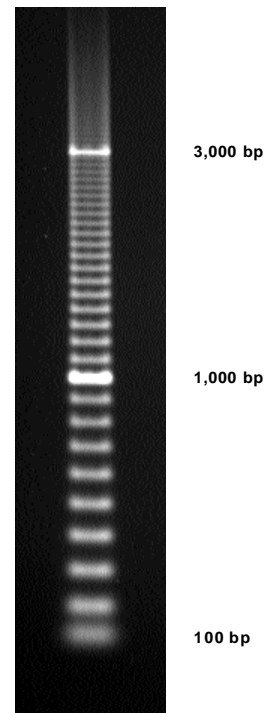


Fig. 3. 5 μ l of the EZ Load 100 bp PCR molecular ruler was loaded onto a 0.8% Molecular Biology Certified agarose gel. The gel was run at 140 V for 2.5 hours in 1x TBE buffer. The gel was stained in EtBr for 15 minutes and destained in dH₂O for 30 minutes.

EZ Load 500 bp Molecular Ruler

Catalog Number 170-8354

Use	Load 5 μ l per lane. This loading translates into 400 ng of DNA per lane. Adjustments may be made to the loading volume for different well sizes and desired band intensity. The EZ Load 500 bp molecular ruler can be resolved in agarose gels of up to 2%.
Contents	1 vial EZ Load 500 bp molecular ruler, 500 μ l supplied in 5% glycerol, 15 mM Tris pH 8.0, 1.5 mM EDTA, 0.04% bromophenol blue, 0.04% xylene cyanole FF.
Concentration	80 μ g/ml
Size	16 bands: 500–8,000 bp in exact 500 bp increments. A visually distinct reference band at 5 kb contains three times the concentration of material found in the other bands.

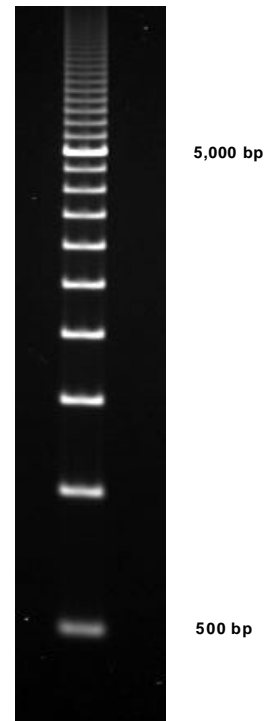


Fig. 4. 5 μ l of the EZ Load 500 bp molecular ruler was loaded onto a 0.8% Molecular Biology Certified agarose gel. The gel was run at 140 V for 2.5 hours in 1x TBE buffer. The gel was stained in EtBr for 15 minutes and destained in dH₂O for 30 minutes.

EZ Load 1 kb Molecular Ruler

Catalog Number 170-8355

Use	Load 5 μ l per lane. This loading translates into 400 ng of DNA per lane. Adjustments may be made to the loading volume for different well sizes and desired band intensity. The EZ Load 1 kb molecular ruler can be resolved in agarose gels of up to 2%.
Contents	1 vial EZ Load 1 kb molecular ruler, 500 μ l supplied in 5% glycerol, 15 mM Tris pH 8.0, 1.5 mM EDTA, 0.04% bromophenol blue, 0.04% xylene cyanole FF.
Concentration	80 μ g/ml
Size	15 bands: 1–15 kb in exact 1 kb increments. A visually distinct reference band at 5 kb contains three times the concentration of material found in the other bands.

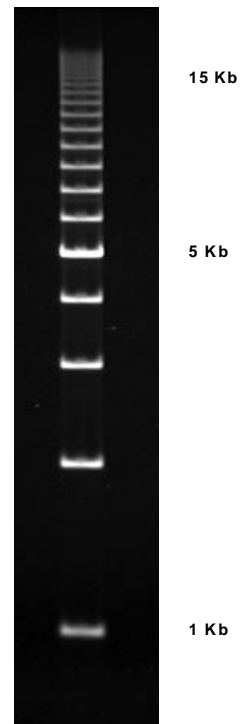


Fig. 5. 5 μ l of the EZ Load 1 kb molecular ruler was loaded onto a 0.7% Molecular Biology Certified agarose gel. The gel was run at 140 V for 2.5 hours in 1x TBE buffer. The gel was stained in EtBr for 15 minutes and destained in dH_2O for 30 minutes.

EZ Load Precision Molecular Mass Standard

Catalog Number 170-8356

Use Load 5 μ l per lane. Adjustments may be made to the loading volume for different well sizes and desired band intensity. The EZ Load Precision Molecular Mass Standard can be resolved in agarose gels of up to 2% and polyacrylamide gels up to 8%.

When used at 5 μ l per lane:

1,000 bp 100 ng

700 bp 70 ng

500 bp 50 ng

200 bp 20 ng

100 bp 10 ng

Contents 1 vial EZ Load Precision Molecular Mass Standard, 500 μ l supplied in 5% glycerol, 15 mM Tris pH 8.0, 1.5 mM EDTA, 0.04% bromophenol blue, 0.04% xylene cyanole FF.

Concentration 50 μ g/ml

Determination of concentration The concentration values of the EZ Load Precision Molecular Mass Standard fragments are determined by UV absorbance at 260 nm wavelength using the conversion factor: 1.00 A_{260} unit = 50 μ g/ml DNA. Fragment concentrations are accurate to within \pm 1%.

Please note To maintain accurate fragment concentrations, it is imperative to spin down any condensate and mix contents thoroughly before opening tubes and withdrawing aliquots.

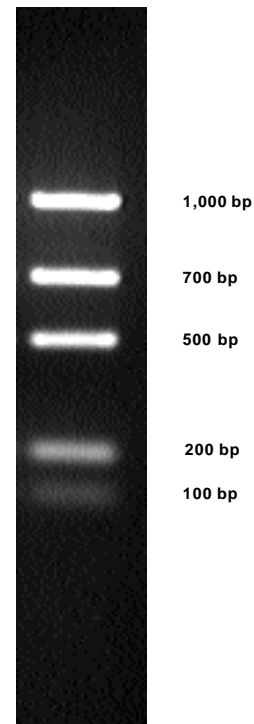


Fig. 6. 5 μ l of the EZ Load Precision Molecular Mass Standard was loaded onto a 1.8% Molecular Biology Certified agarose gel. The gel was run at 70 V for 75 minutes in 1x TBE buffer. The gel was stained in EtBr for 15 minutes and destained in dH_2O for 30 minutes.

Ordering Information

Catalog Number	Product Description
162-0144	AmpliSize Agarose , 50 g
162-0133	Molecular Biology Certified Agarose , 100 g
161-0767	5x Nucleic Acid Sample Loading Buffer , 10 ml