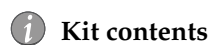




Contents

Catalog No.
10488096

Amount
100 applications



Kit contents



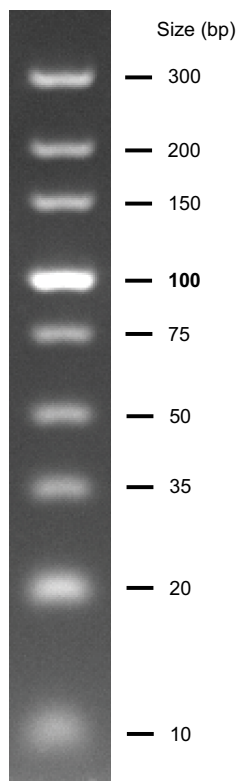
Storage

- Product is shipped at [ambient temperature](#).
- Store at room temperature or at 4°C for up to 6 months, or at -20°C for long term storage.



Product description

- The Invitrogen™ E-Gel™ Ultra Low Range DNA Ladder is designed for sizing and quantification of double stranded DNA on 4% E-Gel™ agarose gels.
- The E-Gel™ Ultra Low Range DNA Ladder consists of 9 individual chromatography-purified DNA fragments ranging in size from 10 bp to 300 bp.
- A reference band at 100 bp is included for easy orientation.
- The ladder is supplied with 1X E-Gel™ Sample Loading Buffer for sample DNA.



Online resources

- Visit our [product pages](#) for additional information and protocols.
- Go online to view related [DNA ladders and markers](#).
- For support, visit thermofisher.com/support.



Required materials

- E-Gel™ EX or other E-Gel™ agarose gel (See [Choosing the right DNA ladder for your E-Gel™ agarose gel](#))
- TE Buffer (Cat. No. AM9858)
- Ultrapure™ DNase/RNase-Free Distilled Water (Cat. No. 10977023)



Important guidelines

- Do not heat the E-Gel™ Ultra Low Range DNA Ladder before loading.
- Load the same volume of DNA sample and DNA ladder.
- For quantification, adjust the concentration of the sample to equalize it approximately with the amount of DNA in the nearest band of the ladder.
- Dilute sample DNA in TE buffer to avoid degradation of DNA sample.

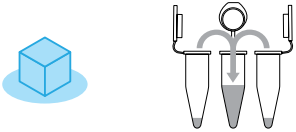
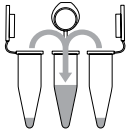
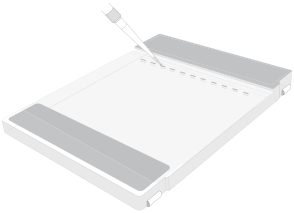
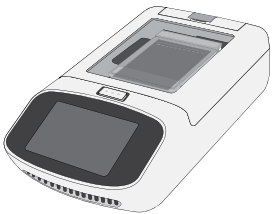

Choosing the right DNA ladder for your E-Gel™ agarose gel

Troubleshooting

Limited product warranty and disclaimer details

Prepare DNA ladders and samples for electrophoresis

This protocol provides a brief description of how to use the DNA ladder with E-Gel™ agarose gels. For detailed instructions on using specific types of E-Gel™ agarose gels, go to thermofisher.com or contact Technical Support.

| Step | | Action | | | | | | | | | | | | | | | | | | |
|--|---|---|----------|---------|----------------------|--|--|--|----------------------------|-------------|---------------------|-------------------------|----------|---------------------|------------------------------|--|--|----------------------------|----|--------|
| 1 |  | <p>Prepare DNA ladder</p> <p>a. Thaw, mix and briefly centrifuge DNA ladder before use.</p> <p>b. Prepare DNA ladder.</p> <ul style="list-style-type: none"> For 4% E-Gel™ EX Agarose Gels, mix 4 µL of DNA ladder with 16 µL of water. For 4% E-Gel™ Agarose Gels, mix and use the ladder without dilution. For 4% E-Gel™ 48 Agarose Gels, mix 2 µL of DNA ladder with 13 µL of water. | | | | | | | | | | | | | | | | | | |
| 2 |  | <p>Prepare samples</p> <p>a. Dilute your sample 2- to 10-fold with TE Buffer (Cat. No. AM9858), 1X E-Gel™ Sample Loading Buffer (Cat No. 10482055), or water.</p> <p>b. Mix gently.</p> | | | | | | | | | | | | | | | | | | |
| 3 |  | <p>Load samples and DNA ladders</p> <p>a. Load DNA ladders and DNA samples into the appropriate wells of the E-Gel™ agarose gel.</p> <ul style="list-style-type: none"> Add 20 µL for E-Gel™ and E-Gel™ EX Agarose Gels. Add 15 µL for E-Gel™ 48 Agarose Gels. <p>b. Add water to any empty wells, so that all wells contain an equal volume of liquid.</p> | | | | | | | | | | | | | | | | | | |
| 4 |  | <p>Perform electrophoresis</p> <p>a. Choose the appropriate E-Gel™ run protocol for your gel type based on the electrophoresis device being used.</p> <table border="1" data-bbox="978 954 2039 1203"> <thead> <tr> <th>Gel type</th> <th>Program</th> <th>Recommended run time</th> </tr> </thead> <tbody> <tr> <td colspan="3">E-Gel™ Power Snap Electrophoresis Device (Cat. No. G8100)</td> </tr> <tr> <td>E-Gel™ EX Agarose Gel (4%)</td> <td>E-Gel EX 4%</td> <td>15 min (20 min max)</td> </tr> <tr> <td>E-Gel™ Agarose Gel (4%)</td> <td>E-Gel 4%</td> <td>30 min (40 min max)</td> </tr> <tr> <td colspan="3">E-Gel™ E-Base™ Device</td> </tr> <tr> <td>E-Gel™ 48 Agarose Gel (4%)</td> <td>EG</td> <td>17 min</td> </tr> </tbody> </table> <p>b. Run the program to start electrophoresis.</p> | Gel type | Program | Recommended run time | E-Gel™ Power Snap Electrophoresis Device (Cat. No. G8100) | | | E-Gel™ EX Agarose Gel (4%) | E-Gel EX 4% | 15 min (20 min max) | E-Gel™ Agarose Gel (4%) | E-Gel 4% | 30 min (40 min max) | E-Gel™ E-Base™ Device | | | E-Gel™ 48 Agarose Gel (4%) | EG | 17 min |
| Gel type | Program | Recommended run time | | | | | | | | | | | | | | | | | | |
| E-Gel™ Power Snap Electrophoresis Device (Cat. No. G8100) | | | | | | | | | | | | | | | | | | | | |
| E-Gel™ EX Agarose Gel (4%) | E-Gel EX 4% | 15 min (20 min max) | | | | | | | | | | | | | | | | | | |
| E-Gel™ Agarose Gel (4%) | E-Gel 4% | 30 min (40 min max) | | | | | | | | | | | | | | | | | | |
| E-Gel™ E-Base™ Device | | | | | | | | | | | | | | | | | | | | |
| E-Gel™ 48 Agarose Gel (4%) | EG | 17 min | | | | | | | | | | | | | | | | | | |
| 5 |  | <p>Visualize agarose gel</p> <p>Visualize DNA ladder and samples.</p> <ul style="list-style-type: none"> Use the E-Gel™ Power Snap Camera (Cat. No. G8200), E-Gel™ Imager (Cat. No. 466612), or other blue light imager to detect DNA bands stained with SYBR™ stains. UV transilluminator to detect DNA bands stained with ethidium bromide. | | | | | | | | | | | | | | | | | | |