## **Plasmid preparation**

Plasmid preparation was performed using the Zyppy<sup>™</sup> Plasmid Miniprep Kit from Zymo Research.

- 1. Centrifuge 1.5 mL of bacterial culture for 30 seconds at maximum speed.
- 2. Discard the supernatant and repeat step 1.
- 3. Add 600  $\mu$ L of TE or water to the bacterial cell pellet and resuspend completely.
- 4. Add 100  $\mu$ L of 7x Lysis Buffer, mix by inverting the tube 4 to 6 times, and incubate for 1-2 minutes. Do not vortex.
- 5. Add 350 µL of cold Neutralization Buffer and mix thoroughly. Do not vortex.
- 6. Centrifuge for 2 to 4 minutes at 11,000x g.
- 7. Place a Zymo-Spin<sup>TM</sup> IIN column in a Collection Tube and transfer the supernatant from step 6 into the Zymo-Spin<sup>TM</sup> IIN column.
- 8. Centrifuge the Zymo-Spin<sup>™</sup> IIN for 15 seconds at 11,000x g.
- 9. Discard the flow-through and return the Zymo-Spin<sup>™</sup> IIN column to the same Collection Tube.
- 10. Add 200  $\mu$ L of Endo-Wash Buffer to the column and centrifuge for 30 seconds at 11,000x g.
- 11. Add 400  $\mu$ L of Zyppy<sup>TM</sup> Wash Buffer to the column and centrifuge for 1 minute at 11,000x g.
- 12. Transfer the column into a clean 1.5 mL microcentrifuge tube and add 30 μL of Zyppy<sup>TM</sup> Elution Buffer directly to the column matrix and incubate for 1 minute at room temperature.
- 13. Centrifuge for 30 seconds at 11,000x g to elute the plasmid DNA.