





# LabChip GXII Protein Assay Quick Guide

## Protein Express Chip Preparation

1. Allow the chip and reagents to equilibrate to room temperature for about 20-30 minutes before use.  
**The Dye Solution must be completely thawed and vortexed before use.**
2. Prepare Gel-Dye by adding **520  $\mu\text{L}$**  Protein Express Gel Matrix  to **20  $\mu\text{L}$**  Protein Express Dye Solution  using a Reverse Pipetting Technique. Vortex and transfer to a spin filter.
3. Prepare Destain solution by adding **250  $\mu\text{L}$**  Protein Express Gel Matrix  to a spin filter. Centrifuge the Gel-Dye and Destain solutions at **9300 rcf for 5 minutes at RT**. Ensure that all of the gel has passed through the filters and then discard the filters.
4. Rinse and aspirate each active well (1, 2, 3, 4, 7, 8, 9 and 10) twice with molecular biology grade water.
5. Add Destain solution to chip wells 2 and 9 (as shown in Figure 1) using a Reverse Pipetting Technique.
6. Add prepared Gel-Dye to chip wells 3, 7, 8 and 10 (as shown in Figure 1) using a Reverse Pipetting Technique.
7. Add Protein Express Lower Marker  to chip well 4 (as shown in Figure 1). Add **40  $\mu\text{L}$**  Protein Express Lower Marker for 96-well plates and **120  $\mu\text{L}$**  Protein Express Marker for 8 hour or multi-plate analysis.
8. Clean both sides of the chip window with the supplied clean room cloth dampened with 70% isopropanol.

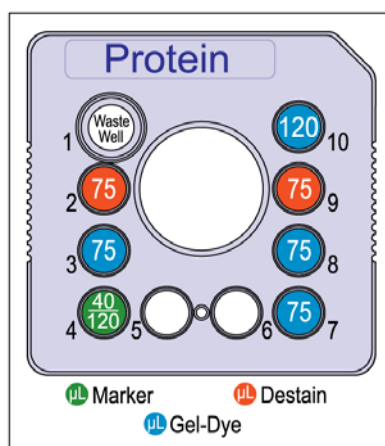





Figure 1

## Protein Sample, Ladder, and Buffer Preparation

1. Prepare denaturing solution by adding **24.5  $\mu\text{L}$**  BME, **24.5  $\mu\text{L}$**  1M DTT or **3.75  $\mu\text{L}$**  100 mM TCEP to **700  $\mu\text{L}$**  Protein Express Sample Buffer .
2. Add **2  $\mu\text{L}$**  (or **5  $\mu\text{L}$**  for High Sensitivity) protein sample to **7  $\mu\text{L}$**  denaturing solution. Samples can be prepared in a microtiter plate or in microcentrifuge tubes.
3. Transfer **12  $\mu\text{L}$**  Protein Express Ladder  to a microcentrifuge tube. *Do not add denaturing solution to the ladder.*
4. Denature samples and ladder at **100°C for 5 minutes**. *Optimum denaturing conditions may vary by sample type.*
5. Add **35  $\mu\text{L}$**  (or **32  $\mu\text{L}$**  for High Sensitivity) water to the samples and **120  $\mu\text{L}$**  water to the ladder and mix.
6. Transfer samples (**44  $\mu\text{L}$** ) to a microtiter plate.
7. Transfer **120  $\mu\text{L}$**  prepared ladder to the provided 0.2 mL Ladder Tube.
8. Add **750  $\mu\text{L}$**  Protein Express Wash Buffer  to the provided Buffer Tube.

