

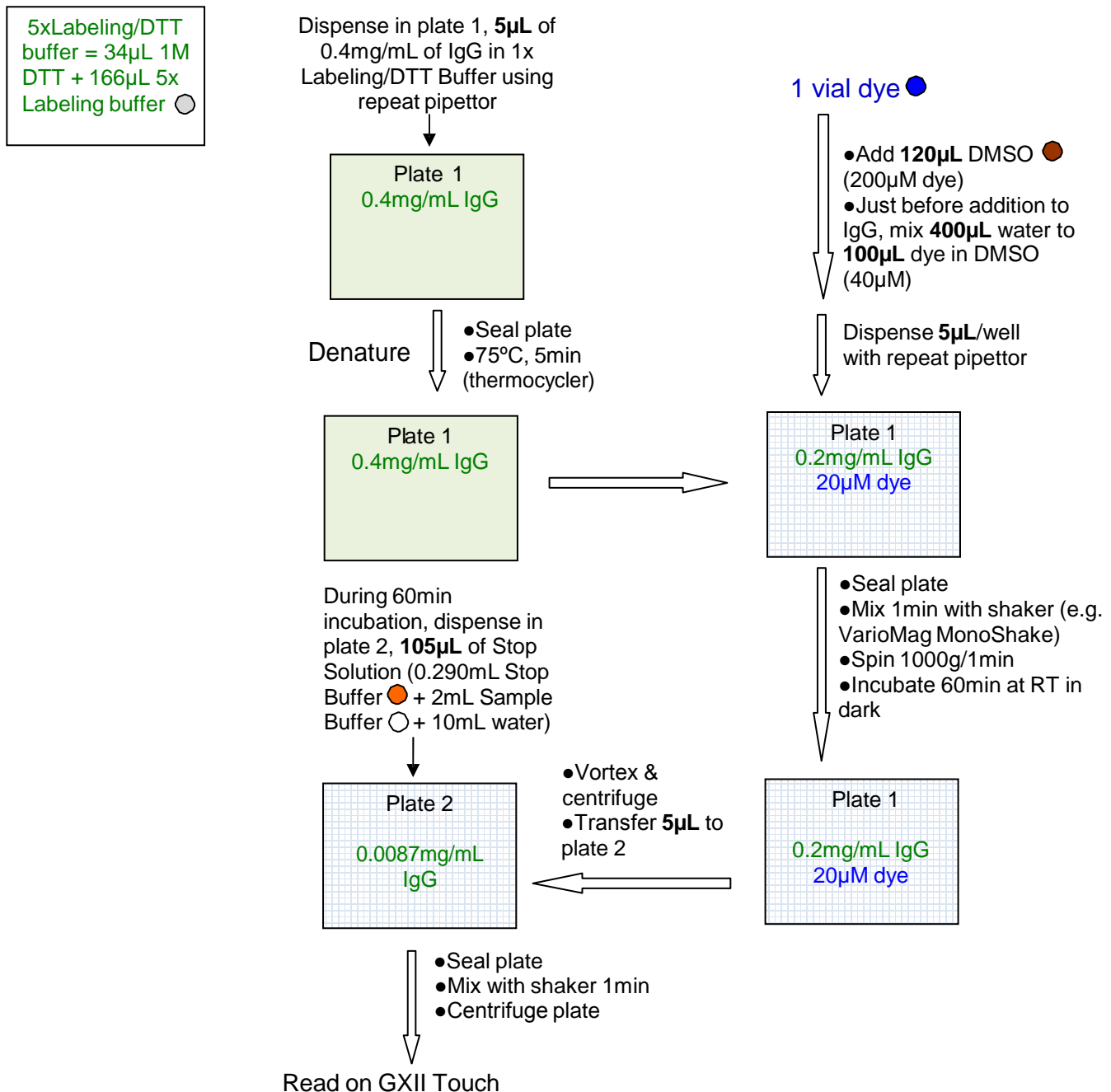
Pico Protein Express Assay Quick Guide

LabChip® GXII Touch

Note: We highly recommend that first-time users read the full User Guide for this assay before proceeding.

CRITICAL: The chip and all refrigerated reagents must equilibrate to room temperature (20 - 25°C) for at least 30 minutes before use.
Remove the Lyophilized Labeling Dye from the padded shipping pack and allow to warm from -20°C to room temperature for 45 minutes, protected from light.

Flowchart for Reduced Sample Preparation



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Flowchart for Nonreduced Sample Preparation

5xLB/1M NEM buffer
 = 20µL 10M NEM in
 DMSO + 14µL water
 + 166µL 5x Labeling
 buffer ○

Dispense in plate 1, **5µL** of
0.4mg/mL of IgG in 1x
 Labeling buffer/200mM NEM
 Buffer using repeat pipettor

Plate 1
0.4mg/mL IgG

Denature
 ● Seal plate
 ● 75°C, 5min
 (thermocycler)

Plate 1
0.4mg/mL IgG

1 vial dye ●

● Add **120µL DMSO** ●
 (200µM dye)
 ● Just before addition to
 IgG, mix **400µL** water to
100µL dye in DMSO
 (40µM)

Dispense **5µL**/well
 with repeat pipettor

Plate 1
0.2mg/mL IgG
20µM dye

During 60min
 incubation, dispense in
 plate 2, **105µL** of Stop
 Solution (0.290mL Stop
 Buffer ● + 2mL Sample
 Buffer ○ + 10mL water)

Plate 2
0.0087mg/mL
IgG

● Vortex &
 centrifuge
 ● Transfer **5µL** to
 plate 2

● Seal plate
 ● Mix 1min with shaker (e.g.
 VarioMag MonoShake)
 ● Spin 1000g/1min
 ● Incubate 60min at RT in
 dark

Plate 1
0.2mg/mL IgG
20µM dye

● Seal plate
 ● Mix with magnetic shaker 1min
 ● Centrifuge plate

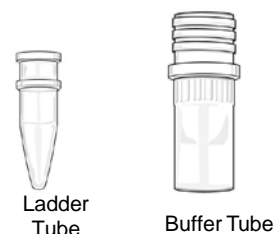
Read on GXII Touch

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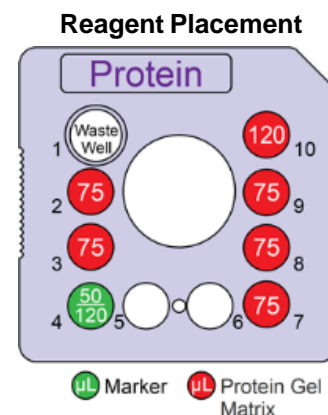
Preparing Pico Protein Express Ladder and Buffer

1. Add 4 µL Pico Protein Express ladder ● to 2 µL of Pico Protein Express 5x Labeling Buffer ○ and 4 µL water (Milli-Q® or equivalent).
2. Vortex and centrifuge.
3. Denature at 75°C for 5 min in Eppendorf tube.
4. Vortex and spin down.
5. Add 5 µL of 40 µM reconstituted dye in water to 5 µL of denatured ladder.
6. Incubate for 60 min at room temperature (25°C) in the dark.
7. Add 155 µL diluted stop solution to reaction and vortex thoroughly and spin down.
8. Transfer 120 µL of prepared ladder to the provided 0.2 mL Ladder Tube.
9. Insert the Ladder Tube into ladder slot on the LabChip GXII Touch instrument.
10. Add 750 µL of Pico Protein Express Wash Buffer ● to the 0.75 mL Buffer Tube provided with the reagent kit.
11. Insert the Buffer Tube into the buffer slot on the LabChip GXII Touch instrument.



Preparing Protein Chip

1. Add 75 µL of Pico Protein Express Gel Matrix ● solution to chip wells 2, 3, 7, 8, and 9, and 120 µL to well 10 using a reverse pipetting technique.
2. If the chip will be used to analyze multiple 96-well plates or will be in use for up to 8 hours, add 120 µL of Pico Protein Express Lower Marker ● to chip well 4. If the chip will only be used to analyze one 96-well plate or a partial plate and then stored for future use, the marker volume can be reduced to 50 µL.
3. Place the chip in the LabChip GX II Touch instrument to begin the assay.



Add Marker and Gel according to the image above.

Cleaning and Storing the Chip

After use, the chip must be cleaned and stored in the chip container.

1. Place the chip into the plastic storage container. The sipper should be submerged in the fluid reservoir.
2. Remove the reagents from each well of the chip using vacuum.
3. Rinse and aspirate each active well (1, 2, 3, 4, 7, 8, 9, and 10) twice with water (Milli-Q® or equivalent).
4. Add 120 µL of water (Milli-Q® or equivalent) to active wells.
5. Cover the wells with Parafilm® to prevent evaporation and store the chip at room temperature until next use. Allowing chip wells to dry may lead to changes in chip performance. Use to the total lifetime within 30 days of analyzing the first sample.

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Assay Specifications

The Pico Protein Express Assay is for use with LabChip GXII Touch instruments. LabChip GXII Touch instruments are for research use only and not for use in diagnostic procedures.

Sizing Range	14 kDa – 200 kDa
Sizing Resolution ¹	± 10% difference in molecular weight
Sizing Accuracy ²	± 20%
Assay Antibody Linear Concentration Range	50 pg/μL – 500 ng/μL (4 logs)
Antibody LOD in original sample	50 pg/μL
Assay Protein Linear Concentration Range	10 pg/μL – 100 ng/μL (4 logs)
Protein LOD in original sample	10 pg/μL
Sensitivity of % Purity	0.1% of the total protein
Well to Well Signal Carryover	<0.5%
Chip Lifetime	HT Chip: 400 samples 24 Chip: 200 samples
Samples per Chip Prep	HT: up to 400 samples (four 96-well plates or one 384-well plate) or LT: up to 96 samples
Chip Preps per Reagent Kit	4 HT or LT chip preps

¹ Resolution is defined as the height of the valley between two peaks to be no more than 50% of the maximum peak height. Actual separation performance can depend on the sample and application.

² Labeling efficiencies will vary from protein to protein.

Contact Revvity

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For the complete Pico Protein Express Assay User Guide, go to: <http://www.revvity.com>

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