

Product Name: 40nm gold nanospheres

Catalog Number: GLD40

1. Product Description

Gold nanoparticles designed for immunoassays such as lateral flow assays. The product enables protein conjugation through a simple passive adsorption procedure without the need for washing steps.

2. Storage and shelf life

Store the nanoparticles at 4 °C upon receipt. Do not freeze. Use the nanoparticles within 6 months of receipt.

3. Additional Materials Required (Not Included)

pH buffers

Optimization using buffers of different pH values is recommended for efficient gold nanoparticle conjugation. The buffers listed below are commonly used for this purpose. A complete set of these buffers is available in the Instanosis Lateral Flow Assay Development Optimization Kit (Catalog Number LFAOK26).

- 100 mM HEPES buffer, pH 7.0 - 8.0 (0.2 pH unit increments)
- 100 mM Boric buffer, pH 9.0 - 9.0 (0.2 pH unit increments)
- 100 mM Na₂CO₃

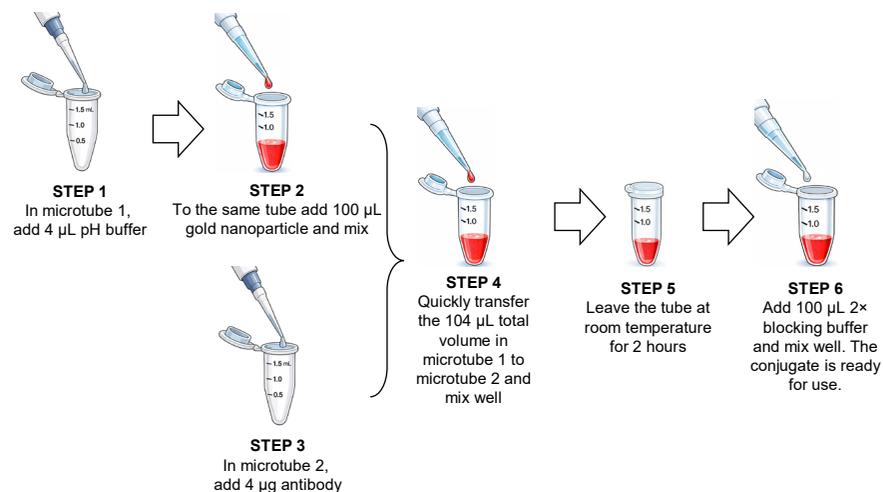
2x blocking buffer

Buffers containing a blocking protein such as BSA. A recommended recipe is below:

20 mM phosphate buffer, pH 7.4, 10% sucrose, 1% tween 20, 10% trehalose, 2% BSA, 0.2% NaN₃
(To make 1L: 13.916 mL 1 M K₂HPO₄; 6.084 mL 1 M KH₂PO₄; 100 g sucrose; 10 mL Tween-20; 100 g trehalose; 20 g BSA; 2 g NaN₃)

3. Procedures for gold nanoparticle conjugation

(The following protocol is for conjugating 100 µL of nanoparticles. For alternative volumes, adjust the scale of all components accordingly)



For optimization, test each pH buffer. If precipitation occurs or the gold nanoparticle solution changes significantly to a purple color, discard that pH condition. Continue with the conditions in which no precipitation is observed and the gold nanoparticle color remains unchanged.