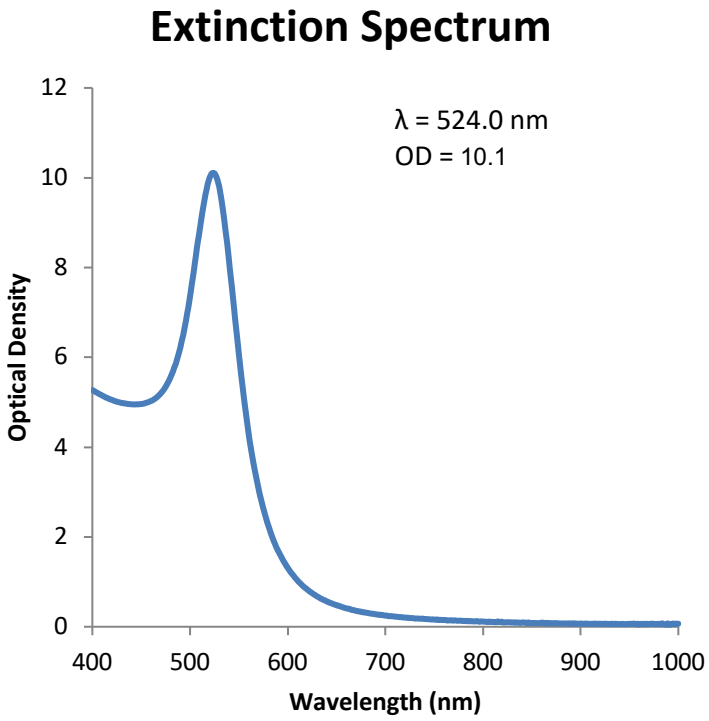
Protein A Colloidal Gold for Lateral Flow
Certificate of Analysis

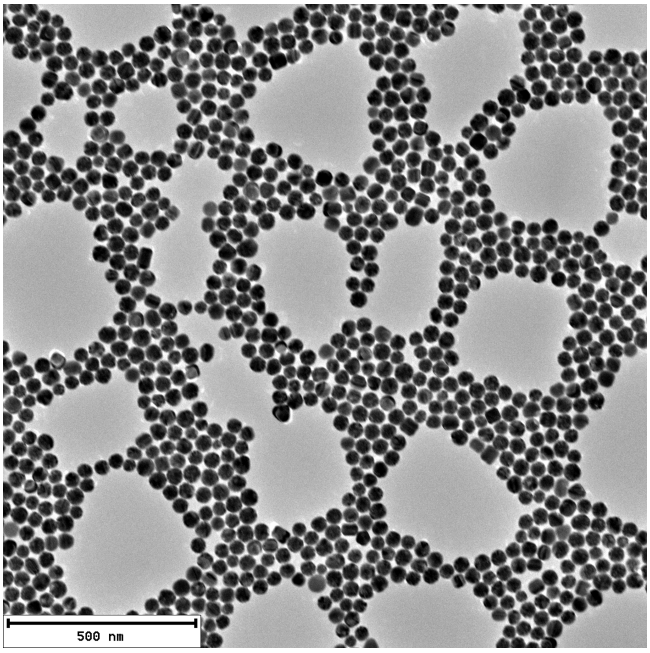
Protein A Colloidal Gold for Lateral Flow (1 mL)
Product #: AU2016

	Product Specs		Product Specs
Diameter:	40.0 ± 2.5 nm	**Mass Concentration (Au):**	0.37 – 0.42 mg/mL
Standard Deviation:	< ±4.0 nm	**Particle Concentration:**	5.2 – 7.3 x 10^{11} per mL
%CV*:	< 10%	**pH:**	7.0 – 8.5
SPR Peak:**	523.5 nm ± 1 nm	**Particle Surface:**	Covalently Attached Biotin
Optical Density:	10 – 11	**Zeta Potential:**	-50 ± 20 mV
Molarity:	0.8 – 1.2 nM	**Solvent:**	DIUF***

*** %CV = coefficient of variation (standard deviation ÷ diameter × 100)**
**** SPR = surface plasmon resonance**
***** DIUF = deionized and ultrafiltrated water (18.2 MΩ-cm)**

Functional testing of Protein A 40nm colloidal gold on a lateral flow test. Protein A 40nm colloidal gold was incubated in lateral flow running buffer alone or in the presence of a limiting amount of monoclonal antibody that targets the chemical-BSA conjugate. The gold was then applied to the sample port of a cassette containing a lateral flow strip sprayed with a chemical conjugate (Chemical-BSA) on the test line and a goat anti mouse antibody as the control line. The data demonstrates the specificity and robustness of the Protein A 40nm colloidal gold.





Suggested Storage and Handling Procedures

Store at 2-8 °C away from light. Storage at low temperature increases shelf life and stability of the nanoparticles, preventing changes in shape and/or size.

DO NOT FREEZE. Freezing will induce irreversible aggregation of particles and destroy the product.

Bring to room temperature and shake well before each use. Particles may settle to the bottom over time. Shake vigorously for 30 seconds to ensure particles are fully dispersed before use. Visually inspect to ensure all product has redispersed. If particulates or plating remain, sonicate for 1 minute, shake, and repeat as necessary. To minimize heating, do not sonicate for periods longer than 1 minute.

Dilution. We suggest diluting the particles with 22mM Boric Acid pH 8.5 + 0.1% BSA for optimal stability.

Quality Control. If there are visible particulates or a change in the color or intensity of the dispersion, the nanoparticles may have aggregated. Filter the solution using a ≤ 0.45 µm polyvinylidene fluoride filter and save the filtered product. Check quality with spectrophotometry and electron microscopy.