



PRODUCT SPECIFICATION SHEET

40 nm Streptavidin Functionalized Gold Nanospheres

Product #: AU2017 Lot #: 202610036 Retest Date: October 2027

Gold Nanospheres	Specification
Gold volume	1 mL
Diameter	40.0 ± 2.5 nm
SPR peak	534.0 ± 1 nm
Optical density	10.25
pH	7.6

Streptavidin Gold Running Buffer	Specification
Volume	50 mL
pH	7.6
Lot number	202607051

Lot QC result: SPR peak measured at 534 nm; optical density 10.25 at the SPR peak.

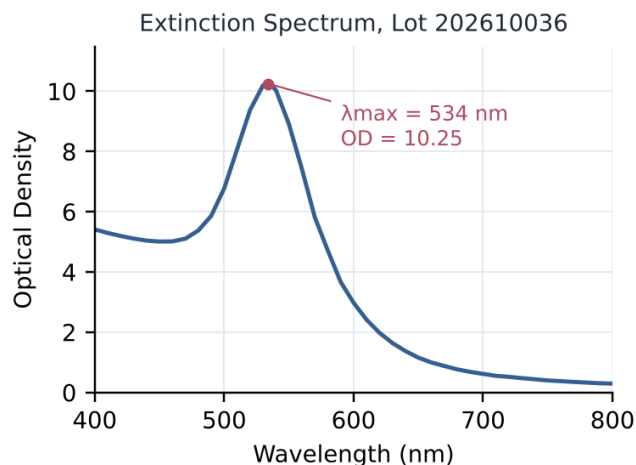


Figure 1. Extinction spectrum of lot 202610036, measured at a 1:10 dilution in water, blank-subtracted and corrected to the undiluted optical density. 10 nm steps from 400–800 nm, with 1 nm steps from 530–540 nm around the SPR peak (534 nm).

General Use Guide for Oligonucleotides

For the best results with oligonucleotides:

1. Add 100–200 µL of running buffer.
2. Add ~5 µL of 10.25 OD gold to the well.
3. Add ~1 pmol of oligonucleotide.
4. Let the assay run for 10–15 minutes.

To spray or spot onto conjugate pads, please inquire for recommendations at sales@attogene.com.

Storage and Handling

Store at 2–8 °C, away from light. Low-temperature storage increases the shelf life and stability of the nanoparticles and prevents changes in shape and/or size.

Do not freeze. Freezing induces irreversible aggregation of the particles and destroys the product.

Preparation and Use

Equilibrate and mix before each use. Bring the product to room temperature and shake well. Particles may settle over time. Shake vigorously for 30 seconds to fully disperse the particles. Visually confirm that all product is re-dispersed. If particulates or plating remain, sonicate for up to 5 minutes in a sonicator bath, shake, and repeat as needed. Do not sonicate for longer than 5 minutes at a time to limit heating.

Dilution. We suggest diluting the particles in 150 mM PBS, 0.01% Tween-20, pH 7.4.

Quality Control

Visual check. If there are visible particulates, or a change in the color or intensity of the dispersion, the nanoparticles may have aggregated. Filter the solution through a ≤ 0.45 µm polyvinylidene fluoride (PVDF) filter and keep the filtered product. Confirm quality by spectrophotometry and electron microscopy.



FUNCTIONAL PERFORMANCE

40 nm Streptavidin Functionalized Gold Nanospheres

Product #: AU2017

Lot #: 202610036

QC Result: **Pass**

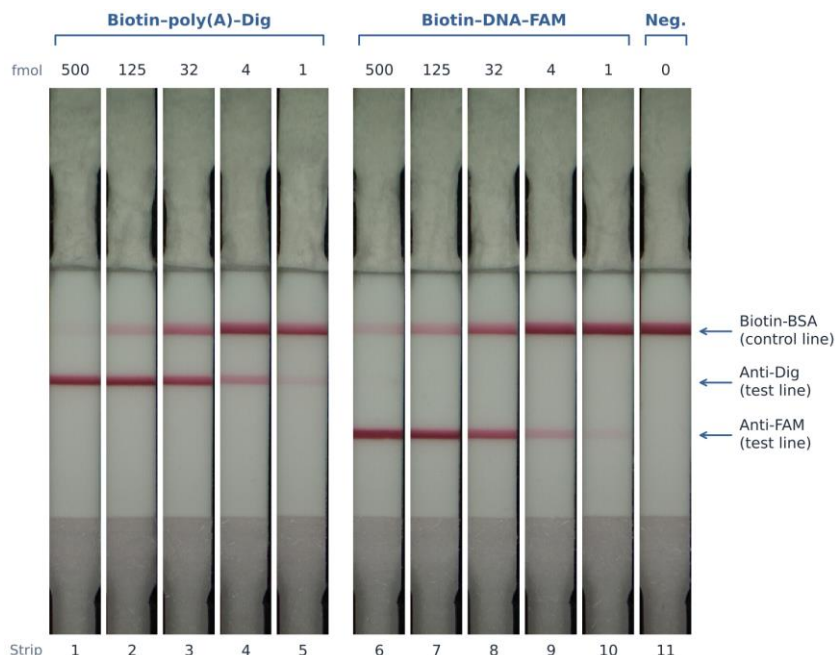


Figure 2. Dipstick strips run with lot 202610036 against a dilution series of each labeled target, read at 15 minutes.

Test Conditions	
Test strips	Lateral flow dipstick strips with an anti-Dig test line, an anti-FAM test line and a biotin-BSA control line
Streptavidin gold	5 µL of AU2017, lot 202610036 (10.25 OD) per test
Running buffer	150 µL of Streptavidin Gold Running Buffer, lot 202607051, per test
Targets	Biotin-digoxigenin oligonucleotide (strips 1–5) and Biotin–FAM oligonucleotide (strips 6–10) at 500, 125, 32, 4 and 1 fmol; negative control with no target (strip 11)
Run time	15 minutes

Strip	Sample	Biotin-BSA control line	Anti-Dig test line	Anti-FAM test line
1	Dig, 500 fmol	104,989	1,745,462	2,330
2	Dig, 125 fmol	386,107	1,725,923	2,933
3	Dig, 32 fmol	978,678	1,558,726	3,511
4	Dig, 4 fmol	1,527,833	722,465	6,635
5	Dig, 1 fmol	1,369,922	199,497	2,008
6	FAM, 500 fmol	311,945	16,046	1,881,964
7	FAM, 125 fmol	625,806	10,544	1,781,368
8	FAM, 32 fmol	1,171,702	9,383	1,369,542
9	FAM, 4 fmol	1,629,693	8,145	468,924
10	FAM, 1 fmol	1,722,419	10,619	148,354
11	Negative control	1,733,387	7,016	3,164

Table 1. Measured line signal (arbitrary units). The matching test line for each target is shown in bold.

Result: Each target produced signal on its matching test line at every amount tested, down to 1 fmol. The negative control showed the control line only. **Pass.**