

## NITgold Lipoic 3nm

#510027 & #510028

**STORE AT 4°C away from light. DO NOT FREEZE**

### Description

Lipoic capped gold nanoparticles are uniform spherical gold nanoparticles with a high monodisperse particle size distribution. These nanoparticles are derivatized with a self-assembly monolayer of thioctic acid carrying a carboxylate end group, which can be used as an excellent scaffold for further stepwise modification to immobilize biomolecules. Once functionalized, they can be employed as platforms for many applications such as target-specific drug delivery, sensors, imaging probes for dark-field microscopy, cancer photothermal therapy and optoelectronic. AuNPs show long-term stability in biological media at pH>6.0 for nearly a year.

### Technical Specifications

**Particle Surface:** Thioctic acid capping

**Peak SPR wavelength:** 510 nm

**Average Diameter:**<sup>1</sup> 2.9 nm

**Particle Diameter (TEM):** 2.9 ± 0.8 nm

**Molar Concentration:**<sup>2</sup> 0.6 μM

**O.D.:** 1

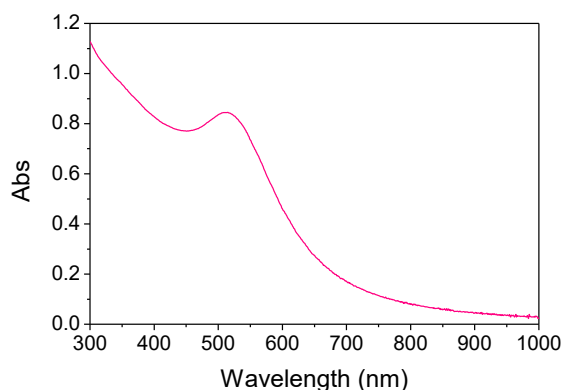
**Particle Concentration:** 3.4×10<sup>14</sup> particles/mL

**Solvent:** 20 mM Hepes buffer, pH 7.5.

<sup>1</sup> Particle diameter determined by Surface Plasmon Resonance from the spectrum. Haiss et al. Anal. Chem. 2007, 79, 4215-4221.

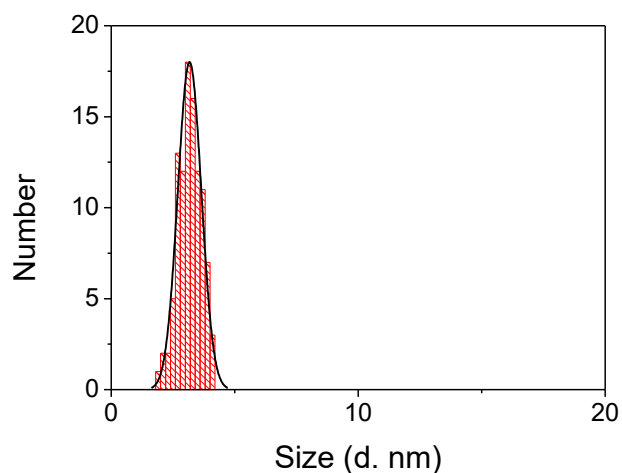
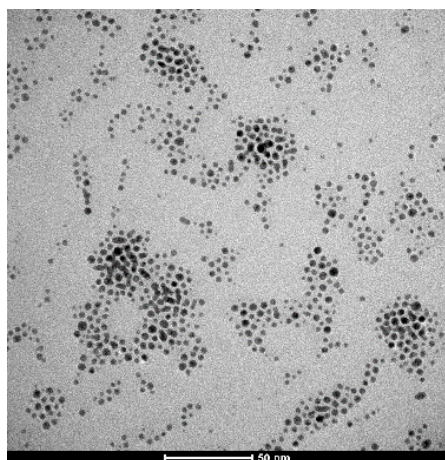
<sup>2</sup> Determined according to a  $\epsilon = 1.76 \times 10^6 \text{ M}^{-1} \cdot \text{cm}^{-1}$ . Werts et al. Analyst 2013,138, 583-592.

### UV/visible absorbance spectrum



**TEM image**

**Size histogram btained by TEM)**



**Suggested Application(s)**

- Design of biosensors
- Target-specific drug-delivery
- Imaging probes for dark-field microscopy
- Cancer photothermal therapy
- Optoelectronic

**Ordering Information**

Product Name	Nº Nanoparticles/mL	O.D.	$\epsilon$ (M-1 cm-1)	Quantity	Catalogue No.
NITgold Lipoic 3nm	3,40E+14	1OD	1,76E+06	25mL	51002717V
NITgold Lipoic 3nm	3,40E+14	1OD	1,76E+06	100mL	510027160
NITgold Lipoic 3nm	3,40E+14	1OD	1,76E+06	250mL	51002716C
NITgold Lipoic 3nm	3,40E+14	1OD	1,76E+06	500mL	51002716F
NITgold Lipoic 3nm	1,02E+15	3OD	1,76E+06	25mL	51002817V
NITgold Lipoic 3nm	1,02E+15	3OD	1,76E+06	100mL	510028160
NITgold Lipoic 3nm	1,02E+15	3OD	1,76E+06	250mL	51002816C

**Product disclaimer**

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