

## NIT Silver-COOH-PEG 20 nm

**#51010515Y & #510105161 & #51010615Y & #510106161**

### Description

20 nm-PEG-Silver Nanoparticles are uniform quasi-spherical nanoparticles functionalized with ligand shells of different monodentate poly(ethylene glycol)-thiol (PEG-SH) ligands (3000 or 5000Da) having a carboxylic acid end group, which can be further used to immobilize covalently biomolecules by formation of stable amide bonds with primary amines using the carbodiimide coupling reaction with NHS (N-hydroxysuccinimide) and EDC (1-ethyl-3-(3-dimethylaminopropyl carbodiimide hydrochloride). Polyethylene glycol functionalized gold nanoparticles have a high stability in biological media such as phosphate-buffered saline solution (PBS).

### Technical Specifications

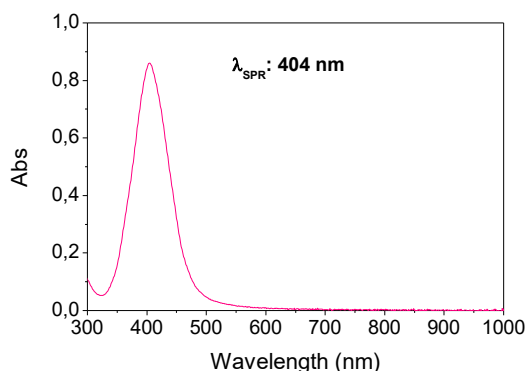
<b>Particle Surface:</b> PEG-COOH(3 - 5 kDa) capping	<b>Peak SPR wavelength:</b> 403-404 nm
<b>Hydrodynamic Diameter (DLS):</b> 29 ± 2 nm	<b>Z-Potential:</b> -14.6 mV
<b>Concentration:</b> 0.02 mg/mL	<b>Molar Concentration:</b> <sup>1</sup> 0.75 nM
<b>Particle Concentration:</b> 4.55×10 <sup>11</sup> particles/mL	<b>O.D.:</b> 5.85
<b>Solvent:</b> Milli-Q Water	<b>pH of Solution:</b> 5.0

<sup>1</sup> Determined according to a  $\epsilon = 7.75 \times 10^9 \text{ M}^{-1} \cdot \text{cm}^{-1}$ . Werts et al. Analyst 2013,138, 583-592.

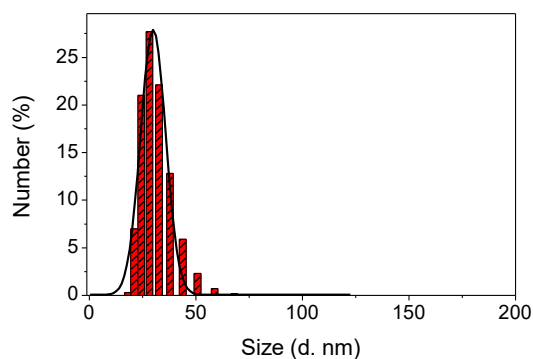
**STORE AT 4°C away from light. DO NOT FREEZE**



### UV/visible absorbance spectrum



### Size Distribution (DLS)



### Suggested Application(s)

- Biological applications
- Bioanalytical applications of SERS spectroscopy

### Ordering Information

Product name	N <sup>o</sup> Nanoparticles/mL	OD	$\epsilon$ (M <sup>-1</sup> cm <sup>-1</sup> )	Quantity	Cat#
NITsilver COOH-PEG 5000Da 20nm	4,552E+11	5.85	7,75E+09	10 ml	51010615Y
NITsilver COOH-PEG 5000Da 20nm	4,552E+11	5.85	7,75E+09	20 ml	510106161
NITsilver COOH-PEG 3000Da 20nm	4,552E+11	5.85	7,75E+09	10 ml	51010515Y
NITsilver COOH-PEG 3000Da 20nm	4,552E+11	5.85	7,75E+09	20 ml	510105161

### Product disclaimer

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