Magnetic nanoparticles coated with gold add new properties (inertness, protection of the magnetic core against oxidation, optical properties) to those of the magnetic particles, without modifying their superparamagnetic behavior. Gold shell is functionalized with poly(ethylene glycol)–thiol (PEG–SH) ligands (3000 and 5000 Da) having a carboxylic acid end group, which can be further used to immobilize covalently biomolecules by formation of stable amide bonds with primary amines.

**Technical Specifications**

**Particle Surface:** PEG\(_{5000}\)-COOH or PEG\(_{3000}\)-COOH  
**Peak SPR wavelength:** 536 ± 2 nm  
**Hydrodynamic Diameter (DLS):** 54.3 nm  
**Polydispersity index:** 0.176  
**Core diameter:**\(^1\) 13.6 ± 1.2 nm  
**Gold thickness:**\(^1\) 38.2 ± 3.5 nm  
**Molar Concentration:**\(^2\) 0.05 nM  
**O.D.:** 1  
**Particle Concentration:** 3.2×10\(^{10}\) particles/mL  
**Solvent:** Milli-Q water

The product may contain some uncoated magnetic particles.

1 Determined by Scanning Electron Microscopy (SEM).  
2 Determined according to a \(\varepsilon = 1.9\times10^{10}\) M\(^{-1}\)· cm\(^{-1}\). Werts et al. Analyst 2013, 138, 583-592.
Suggested Application(s)¹

- Magnetic separation
- Biosensing
- Magnetic hyperthermia
- Drug delivery

Ordering Information

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<tr>
<th>Product name</th>
<th>Nanoparticles/mL</th>
<th>O.D.</th>
<th>ε (M⁻¹ cm⁻¹)</th>
<th>Quantity</th>
<th>Catalogue ref.</th>
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Order by Email: sales@nanoimmunotech.es

Product disclaimer

This nanoparticles product is to be used for research purposes only. Unless stated in the documentation of on an individual product label, catalogue or other information provided to the buyer, it is forbidden to use it for different purposes, including but not limited to: in vitro diagnostic, use in food, pharmaceutical purposes, medical purposes, or use in cosmetic products, neither for use in humans nor animals, nor for any commercial purposes. Please refer to www.nanoimmunotech.eu for the Material Safety Data Sheet of the product.

The information given in this document is to the best of our knowledge.

¹Since conditions of use are beyond our control, we do not warranty the suitability of our products.