

Nanostars 40nm

STORE AT Room Temperature away from light

Description

We commercialize high quality Gold nanostars, formed by multiple branches with sharp tips with highly-competitive characteristics guarantying to meet specifications. Our Gold nanostars are available in size 40 nm but can be produced in other sizes upon request.

PVP STABILIZED: Polyvinylpyrrolidone (PVP) is a polymer that binds strongly to the gold nanoparticle surface providing greater stability than citrate or tannic acid.

Technical Specifications

Core composition: Gold

Peak SPR wavelength: 710 nm

Stabilizer: Polyvinylpyrrolidone (average mol wt 10K)

Solvent: Ethanol

Particle Diameter: 43.9 ± 2.0 nm

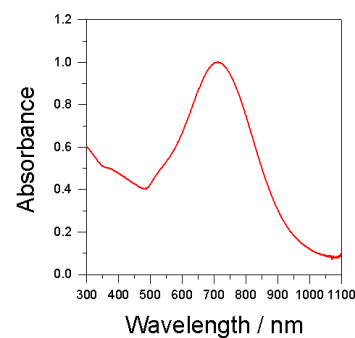
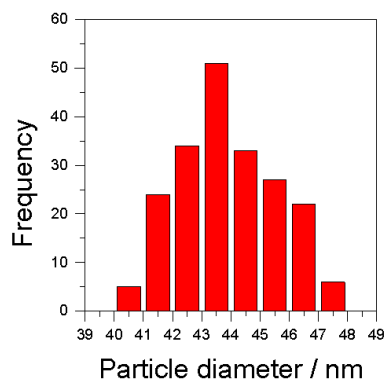
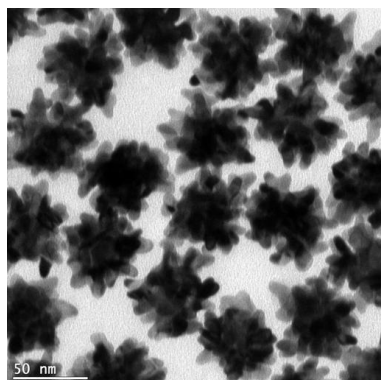
Gold Concentration: 0.20 mM

O.D.: 1

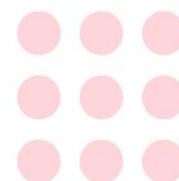
Weight concentration: 0.040 mg/mL

Purity: High (excess reagents and side products removed by centrifugation)

TEM Image



UV/visible absorbance spectrum



Suggested Application(s)

- Surface Enhanced Raman Spectroscopy
- Biosensing
- Colorimetric probes

References:

- 1.- Kumar P. S., Pastoriza-Santos I., Rodríguez-González B., García de Abajo F. J., Liz-Marzán L. M. High-Yield Synthesis and Optical Response of Gold Nanostars. *Nanotechnology*, **2008**, *19*, 015606(1-5).
- 2.- Rodríguez-Lorenzo L., Álvarez-Puebla R. A., Pastoriza-Santos I., Mazzucco S., Stéphan O., Kociak M., Liz-Marzán L. M., García de Abajo F. J. Zeptomol detection through controlled ultrasensitive surface-enhanced Raman scattering. *J. Am. Chem. Soc.* **2009**, *131*, 4616-4618.
- 3.- Barbosa, S., Agrawal, A., Rodríguez-Lorenzo, L., Pastoriza-Santos, I., Alvarez-Puebla, R. A., Kornowski, A., Weller, H., Liz-Marzán, L. M. Tuning Size and Sensing Properties in Colloidal Gold Nanostars. *Langmuir*, **2010**, *26*, 14943–14950.
- 4.- Guerrero-Martínez, A., Barbosa, S., Pastoriza-Santos, I., Liz-Marzán, L. M. Nanostars Shine Bright for You: Colloidal Synthesis, Properties and Applications of Branched Metallic Nanoparticles. *Curr. Op. Colloid Interface Sci.* **2011**, *16*, 118–127.
- 5.- Rodríguez-Lorenzo, L., Krpetic, Z., Barbosa, S., Alvarez-Puebla, R. A., Liz-Marzán, L. M.; Prior, I. A.; Brust, M. Intracellular Mapping with SERS-Encoded Gold Nanostars. *Integr. Biol.* **2011**, *3*, 922–926.
- 6.- Fales A. M., Yuan H., Vo-Dinh T. Silica-Coated Gold Nanostars for Combined Surface-Enhanced Raman Scattering (SERS) Detection and Singlet-Oxygen Generation: A Potential Nanoplatfrom for Theranostics. *Langmuir*, **2011**, *27* (19), 12186–12190.
- 7.- Xie H., Lin Y., Mazo M., Chiappini C., Sánchez-Iglesias A., Liz-Marzán L. M., Stevens M. M. Identification of Intracellular Gold Nanoparticles Using Surface-enhanced Raman Scattering. *Nanoscale*, **2014**, *6*, 12403-12407.

Ordering Information

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 them: 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.

