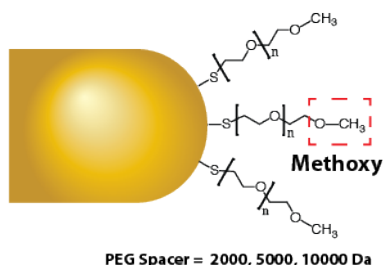


PRODUCT DATA SHEET

Gold Nanorod – Methoxy PEG



Features

- High absorbance cross section yields optimal heat generation
- A range of wavelength absorbance maxima: 670 nm to 760 nm
- Selection of sizes and aspect ratios
- Multiple PEG Spacer sizes available (2 kDa to 10 kDa)
- Stable in physiological buffers
- Low non-specific protein and small molecule adsorption

General Information

Gold nanorods have a very high absorbance cross section and efficiently convert the energy of optical excitation into heat generation. Nanorod geometry can be varied to adjust the maximum absorbance wavelength, allowing it to extend into the near-infrared tissue penetration optical window. This makes gold nanorods optimal probes for photothermal therapy, dark field microscopy and plasmonic nanosensors.

Methoxy-terminated PEG acts to stabilize the particles against charge-induced aggregation and to minimize non-specific protein and small molecule adsorption.

Applications

- Contrast agents for photothermal therapy
- Plasmonic sensors for detection of biological molecules
- Imaging probes for dark field microscopy

Specifications

Physical properties are listed in Table 1

Shelf life: > 1 year (4°C storage)

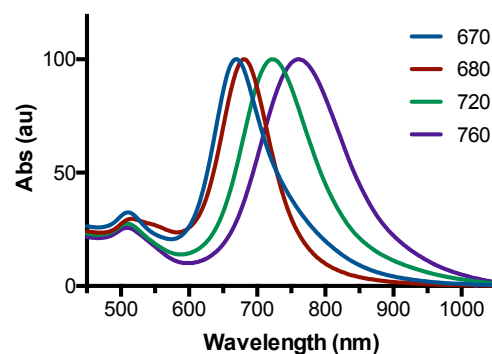
Supplied as liquid suspension in PBS or in water with 0.05% (w/v) Tween-20 @ 50 OD

This product is for R&D uses only. MSDS documentation is available at www.lunanano.com

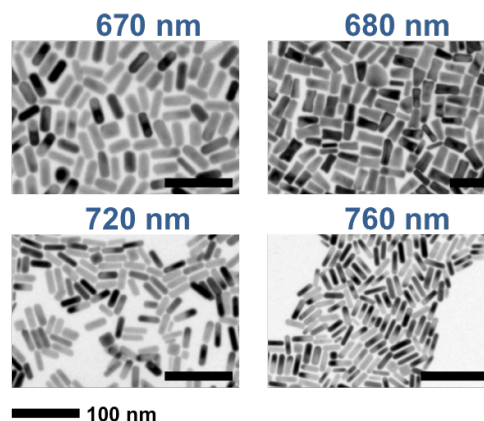
Table 1: Gold Nanorod Physical Properties

Abs (nm)	Length (nm)	Cross Section Diameter (nm)	Aspect Ratio
670	37.9 (±4.4)	13.8 (±2.6)	2.8
680	52.6 (±5.7)	23.9 (±4.2)	2.2
720	30.7 (±5.0)	8.8 (±2.2)	3.5
760	29.2 (±4.7)	7.5 (±1.2)	3.9

Absorbance Spectra



Electron Microscopy



Storage and Handling

For long-term storage (>1 month), store the product at 4°C. For shorter periods (<1 week) product can be stored at room temperature. **DO NOT FREEZE:** freezing will cause nanorods to aggregate.

Vortex briefly prior to use to resuspend nanoparticles.

Ordering Information

- Order through our website at www.lunanano.com, by calling 1-800-474-4055, or by e-mail at sales@lunanano.com.
- Please contact us for custom quantities, nanoparticle sizes, or surface modifications.
- More information is available at www.lunanano.com.

Catalog Number	Product Description	PEG Size	Conc.	Scale
GNR-PEG-670-X-Y	670 nm Peak Abs Methoxy PEG Coated Gold Nanorods	2 kDa, 5 kDa, 10 kDa	50 OD	0.4 mL, 1 mL, 3 mL
GNR-PEG-680-X-Y	680 nm Peak Abs Methoxy PEG Coated Gold Nanorods	2 kDa, 5 kDa, 10 kDa	50 OD	0.4 mL, 1 mL, 3 mL
GNR-PEG-720-X-Y	720 nm Peak Abs Methoxy PEG Coated Gold Nanorods	2 kDa, 5 kDa, 10 kDa	50 OD	0.4 mL, 1 mL, 3 mL
GNR-PEG-760-X-Y	760 nm Peak Abs Methoxy PEG Coated Gold Nanorods	2 kDa, 5 kDa, 10 kDa	50 OD	0.4 mL, 1 mL, 3 mL

X = '2' – 2 kDa, '5' – 5 kDa, '10' – 10 kDa PEG spacer

Y = '04' – 0.4 mL, '1' – 1 mL, '3' – 3 mL scale