



Gold Nanorods PRODUCT DATA SHEET

Gold Nanorods

Description

Gold nanorods (GNRs) exhibit transverse and longitudinal surface plasmon resonances that correspond to electron oscillations perpendicular and parallel to the rod length direction, respectively. Their longitudinal surface plasmon wavelengths (LSPWs) are tunable from the visible to infrared regions. Their absorption cross sections are at least five orders larger than those of conventional dyes, and the light scattering by Au nanorods is several orders larger than the light emission from strongly fluorescent dyes. The tunability in the LSPW, together with strongly enhanced scattering and absorption at the LSPW, makes GNRs useful for the formation of many functional composite materials, for example, with hydrogel, polymers, silica, and bacteria. GNRs also have an axial surface plasmon resonance (SSPR), though one-third that of the LSPR, is still many orders of magnitude greater than quantum dots and nanoshells.

GNRs also offer advantages of good biocompatibility, facile preparation, and conjugation with a variety of biomolecular ligands, antibodies, and other targeting moieties. They have therefore found wide applications in biochemical sensing, biological imaging, medical diagnostics, and therapeutics. Further, GNRs have found application in materials and optics, including polarizers, filters, and to improve the storage density in compact disks.

Abvigen offers multiple gold nanorods modified with ligands, including Gold Nanorods-Citrate, Gold Nanorods-CTAB, Gold Nanorods-NPA, Gold Nanorods-PEI, Gold Nanorods-PAH, Gold Nanorods-PAA, Gold Nanorods-PVP, Gold Nanorods-BSA, Gold Nanorods-Tannic Acid, Gold Nanorods-SDS.

For custom sizes, formulations or bulk quantities please contact our customer service department.

Website: www.abvigen.com **Phone:** +1 929-202-3014 **Email:** info@abvigenus.com



Characteristics

Diameter: 5 ~ 70 nm

Concentration: OD=1 (~ 0.05 mg/ml)

Adsorbed Ligand: Citrate, CTAB, NPA, PEI, PAH, PAA, PVP, BSA, Tannic Acid, SDS

Storage Buffer: DIH

Advantages

Good biocompatibility

Non-cytotoxic

Easy to prepare

Can bind to various biomolecule ligands, antibodies and other targeted parts

Applications

Biochemical sensing

Biological imaging

Medical diagnostics and therapeutics

Polarizers

Filters

Improve the storage density in compact disks

Storage

This product should be stored at 4°C. **DO NOT FREEZE.** Stable for 3 ~ 6 months if stored as specified.

Do not freeze the nanoparticle products. In general once conjugated, neutravidin and custom conjugations should see much greater shelf lives than when left unconjugated. For the longest shelf life, leave the functionalized products in their concentrated form and remove only what is immediately needed.



Handling

Some of our products may reversibly aggregate and settle with time in storage. In these cases, these particles may be resuspended by sonication for five minutes, followed by a two minute vortex.

In shipping, sometimes particles get lodged in the cap of the microcentrifuge container. A quick and easy solution is to put the tube on a vortex mixer for 3-5 s. Then centrifuge at less than < 1000 revs/min for 30 s. This should recollect any particles back into the bulk reservoir.

Notes

This product is for R&D use only, not for drug, household, or other uses.

Ordering Information

Website: www.abvigen.com

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