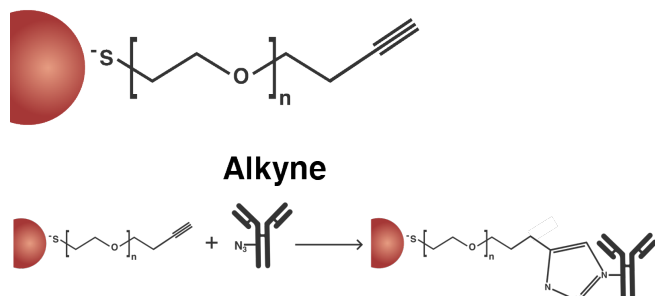


PRODUCT DATA SHEET

Alkyne Gold Nanoparticles



Description

Cytodiagnosics alkyne functionalized gold nanoparticles are suitable for covalent conjugation of any azide-tagged molecule through Cu(I)-catalyzed click chemistry. These gold nanoparticles allow for rapid generation of gold conjugates for subsequent use in downstream assays.

Our alkyne functionalized gold nanoparticles are available in 12 different sizes ranging from 5 -100nm, are more than 95% spherical and have uniform size distribution (CV <12%).

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

Features

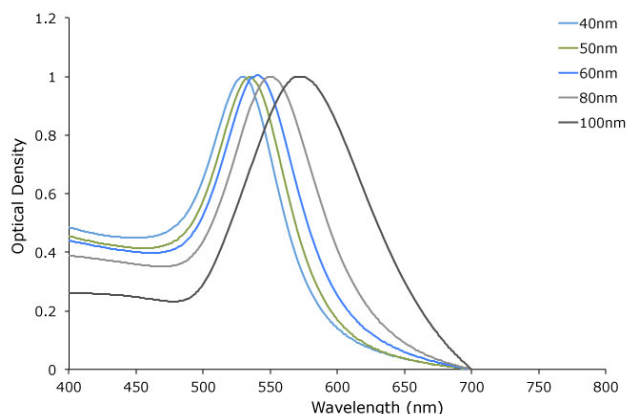
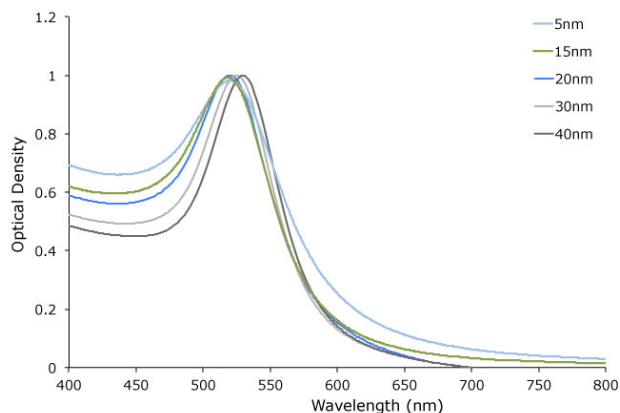
- Superior size distribution compared to the leading competitor; available from 5nm to 100nm.
- Precisely engineered surface with an optimized alkyne density.

Applications

- Ideal for development of gold conjugates for use in applications such as blotting, lateral flow assays, light microscopy, and transmission electron microscopy (TEM) among others.

Characteristics

Core diameter: 5 -100nm (Coefficient of Variance < 12%)
 Polydispersity Index (PDI): < 0.200
 Amount: OD=50
 Absorbance (λ_{max}): 510-570nm
 Alkyne surface density: 1/nm²
 Supplied in H₂O



Storage

This product should be stored at 4°C. **Do not freeze.** If stored as specified, Cytodiagnosics Alkyne Gold Nanoparticles are stable for at least 12 months.

Handling

When stored for a long period of time gold nanoparticles may sediment at the bottom of the vial, which is especially prominent for larger particle sizes. Prior to use, re-suspend the sedimented particles by thorough mixing until a homogenous solution is obtained.

Precautions and Disclaimer

These products are for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet available online at www.cytodiagnosics.com for information regarding hazards and safe handling procedures.

| Diameter (nm) | Peak SPR Wavelength (nm) | NPS/ml | Wt. Conc. (mg/ml) | Molar Ext (M ⁻¹ cm ⁻¹) | Size Dispersity (+/-nm) | Particle Volume (nm ³) | Surface Area (nm ²) | Surface/Volume Ratio | Particle Mass (g) | Molar Mass (g/mol) | Molar Conc. |
|---------------|--------------------------|----------|-------------------|---|-------------------------|------------------------------------|---------------------------------|----------------------|-------------------|--------------------|-------------|
| 5 | 515-520 | 2.74E+15 | 3.47 | 1.10E+07 | <15% | 6.54E+01 | 7.85E+01 | 1.2 | 1.27E-18 | 7.64E+05 | 4.54E-06 |
| 10 | 515-520 | 2.99E+14 | 3.04 | 1.01E+08 | <15% | 5.24E+02 | 3.14E+02 | 0.6 | 1.02E-17 | 6.11E+06 | 4.97E-07 |
| 15 | 520 | 8.20E+13 | 2.81 | 3.67E+08 | <12% | 1.77E+03 | 7.07E+02 | 0.4 | 3.43E-17 | 2.06E+07 | 1.36E-07 |
| 20 | 524 | 3.27E+13 | 2.66 | 9.21E+08 | <12% | 4.19E+03 | 1.26E+03 | 0.3 | 8.12E-17 | 4.89E+07 | 5.45E-08 |
| 30 | 526 | 8.95E+12 | 2.46 | 3.36E+09 | <12% | 1.41E+04 | 2.83E+03 | 0.2 | 2.74E-16 | 1.65E+08 | 1.49E-08 |
| 40 | 530 | 3.58E+12 | 2.33 | 8.42E+09 | <12% | 3.35E+04 | 5.03E+03 | 0.15 | 6.50E-16 | 3.91E+08 | 5.95E-09 |
| 50 | 535 | 1.76E+12 | 2.23 | 1.72E+10 | <10% | 6.54E+04 | 7.85E+03 | 0.12 | 1.27E-15 | 7.64E+08 | 2.92E-09 |
| 60 | 540 | 9.80E+11 | 2.15 | 3.07E+10 | <10% | 1.13E+05 | 1.13E+04 | 0.1 | 2.19E-15 | 1.32E+09 | 1.63E-09 |
| 70 | 548 | 6.00E+11 | 2.09 | 5.03E+10 | <10% | 1.80E+05 | 1.54E+04 | 0.086 | 3.48E-15 | 2.10E+09 | 9.95E-10 |
| 80 | 553 | 3.91E+11 | 2.03 | 7.70E+10 | <10% | 2.68E+05 | 2.01E+04 | 0.075 | 5.20E-15 | 3.13E+09 | 6.50E-10 |
| 90 | 564 | 2.69E+11 | 1.99 | 1.12E+11 | <8% | 3.82E+05 | 2.54E+04 | 0.067 | 7.40E-15 | 4.46E+09 | 4.46E-10 |
| 100 | 572 | 1.92E+11 | 1.95 | 1.57E+11 | <8% | 5.24E+05 | 3.14E+04 | 0.06 | 1.02E-14 | 6.11E+09 | 3.19E-10 |

| Catalog Number | Description | Lambda max (nm) | Sizes |
|----------------|---------------------------------|-----------------|----------------------|
| CGALK-5-X* | 5nm Alkyne Gold Nanoparticles | 515-520 | 0.5ml, 1.0ml (50 OD) |
| CGALK -10- X* | 10nm Alkyne Gold Nanoparticles | 515-520 | 0.5ml, 1.0ml (50 OD) |
| CGALK -15- X* | 15nm Alkyne Gold Nanoparticles | 520 | 0.5ml, 1.0ml (50 OD) |
| CGALK -20- X* | 20nm Alkyne Gold Nanoparticles | 524 | 0.5ml, 1.0ml (50 OD) |
| CGALK -30- X* | 30nm Alkyne Gold Nanoparticles | 526 | 0.5ml, 1.0ml (50 OD) |
| CGALK -40- X* | 40nm Alkyne Gold Nanoparticles | 530 | 0.5ml, 1.0ml (50 OD) |
| CGALK -50- X* | 50nm Alkyne Gold Nanoparticles | 535 | 0.5ml, 1.0ml (50 OD) |
| CGALK -60- X* | 60nm Alkyne Gold Nanoparticles | 540 | 0.5ml, 1.0ml (50 OD) |
| CGALK -70- X* | 70nm Alkyne Gold Nanoparticles | 548 | 0.5ml, 1.0ml (50 OD) |
| CGALK -80- X* | 80nm Alkyne Gold Nanoparticles | 553 | 0.5ml, 1.0ml (50 OD) |
| CGALK -90- X* | 90nm Alkyne Gold Nanoparticles | 564 | 0.5ml, 1.0ml (50 OD) |
| CGALK -100- X* | 100nm Alkyne Gold Nanoparticles | 572 | 0.5ml, 1.0ml (50 OD) |

Note: X* is either -25 for the 0.5ml format, or -50 for the 1.0ml format.

For custom sizes, bulk quantities, and custom gold nanoparticle surface chemistry please contact our dedicated customer service team.