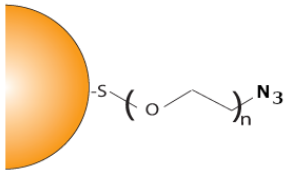


PRODUCT DATA SHEET

Azide Gold Nanoparticles



Description

Cytodiagnosics azide functionalized gold nanoparticles are suitable for covalent conjugation of any molecule with a terminal alkyne through click chemistry. These gold nanoparticles allow for rapid generation of gold conjugates for subsequent use in downstream assays.

Our azide 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

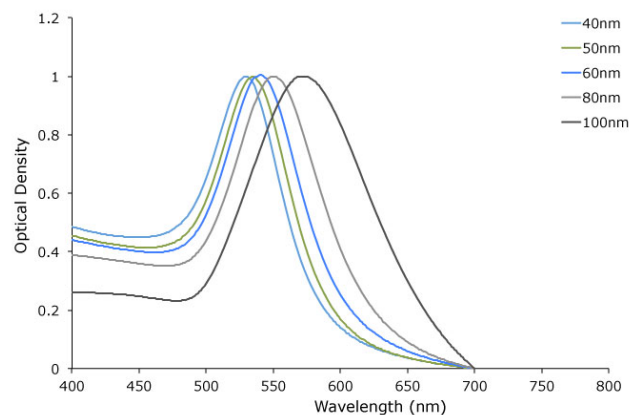
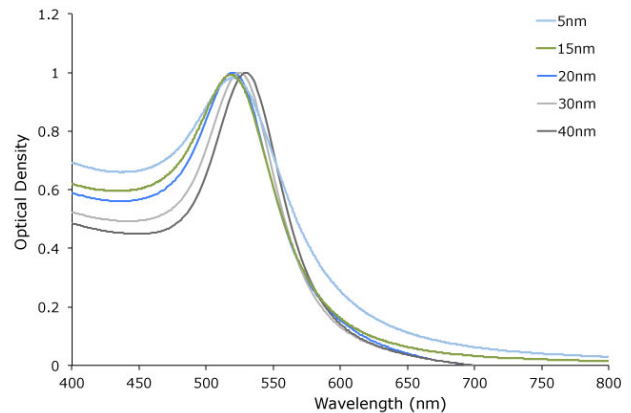
- Superior size distribution compared to the leading competitor; available from 5nm to 100nm.
- Precisely engineered surface with an optimized azide density.

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
 Azide surface density: 1/nm²
 Supplied in H₂O



Storage

This product should be stored at 4°C. Do not freeze. If stored as specified, Cytodiagnosics Azide 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
CGAZ-5-X*	5nm Azide Gold Nanoparticles	515-520	0.5ml, 1.0ml (50 OD)
CGAZ -10- X*	10nm Azide Gold Nanoparticles	515-520	0.5ml, 1.0ml (50 OD)
CGAZ -15- X*	15nm Azide Gold Nanoparticles	520	0.5ml, 1.0ml (50 OD)
CGAZ -20- X*	20nm Azide Gold Nanoparticles	524	0.5ml, 1.0ml (50 OD)
CGAZ -30- X*	30nm Azide Gold Nanoparticles	526	0.5ml, 1.0ml (50 OD)
CGAZ -40- X*	40nm Azide Gold Nanoparticles	530	0.5ml, 1.0ml (50 OD)
CGAZ -50- X*	50nm Azide Gold Nanoparticles	535	0.5ml, 1.0ml (50 OD)
CGAZ -60- X*	60nm Azide Gold Nanoparticles	540	0.5ml, 1.0ml (50 OD)
CGAZ -70- X*	70nm Azide Gold Nanoparticles	548	0.5ml, 1.0ml (50 OD)
CGAZ -80- X*	80nm Azide Gold Nanoparticles	553	0.5ml, 1.0ml (50 OD)
CGAZ -90- X*	90nm Azide Gold Nanoparticles	564	0.5ml, 1.0ml (50 OD)
CGAZ -100- X*	100nm Azide 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 at customer_service@cytodiagnosics.com.