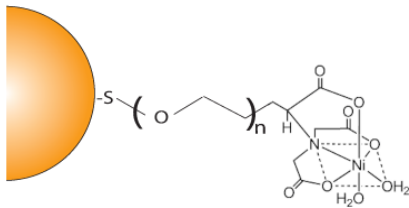


PRODUCT DATA SHEET

Ni-NTA Gold Nanoparticles



Description

Cytodiagnosics Ni-NTA functionalized gold nanoparticles are suitable for binding of proteins with a C-, or N-terminal 6X His tag. These gold nanoparticles allow for rapid generation of gold conjugates of any histidine-tagged protein that can subsequently be used as a probe in downstream applications such as lateral flow assays.

Our Ni-NTA 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

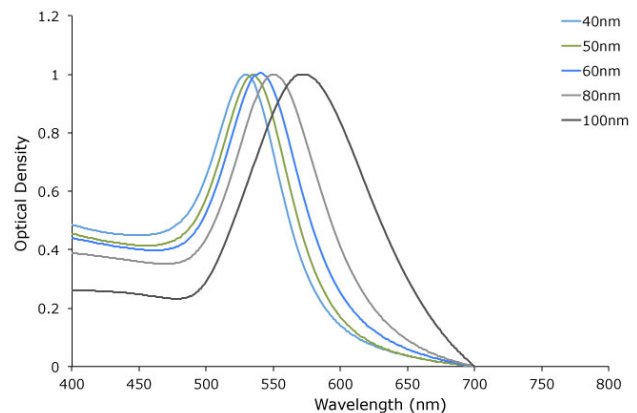
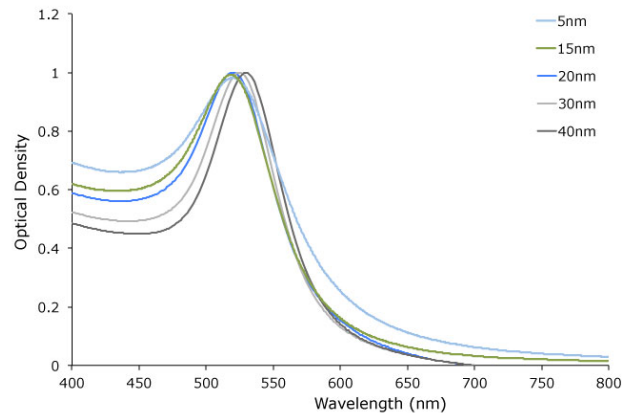
- Superior size distribution compared to the leading competitor; available from 5nm to 100nm.
- Precisely engineered surface with an optimized Ni-NTA density for easy conjugation.

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
 Ni-NTA surface density: 1/nm²
 Supplied in H₂O



Storage

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