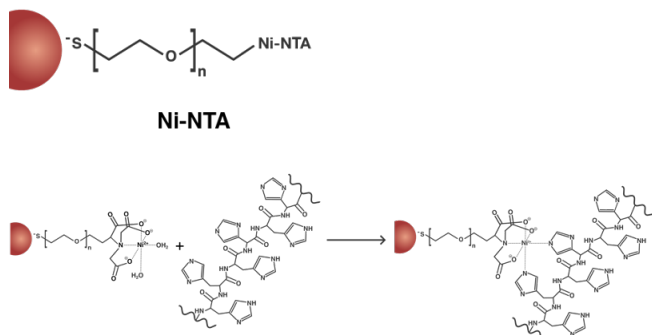


PRODUCT DATA SHEET

Ni-NTA Gold Nanoparticles



Description

Cytodiagnostics 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

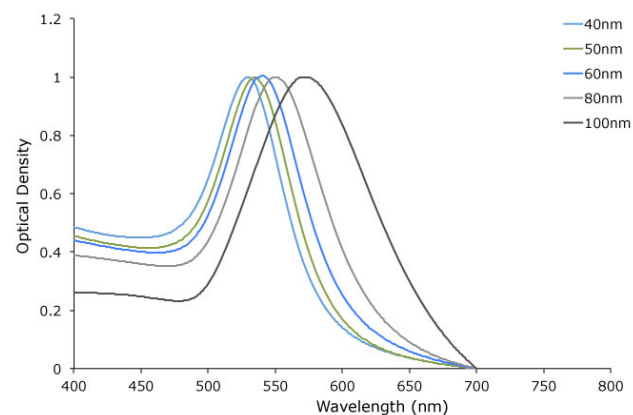
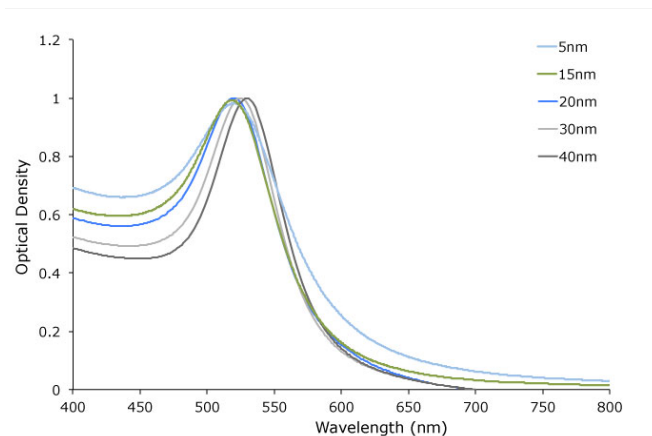
- Superior size distribution compared to the leading competitor; available from 5nm to 100nm.
- Precisely engineered surface with an optimized Ni-NTA density for easy conjugation.

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. If stored as specified, Cytodiagnostics Ni-NTA Gold Nanoparticles are stable for at least 12 months. **DO NOT FREEZE.**

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.

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.