

# Gold Nanoparticle Selection Guide

## Choose Gold Nanoparticle Products Based on Application

Application	Gold Nanoparticle Size Range	Surface Chemistry	Benefits	Related Documents
Protein Conjugation	5nm-100nm	<a href="#">standard (citrate)</a>	Quick	<a href="#">Classic Passive Adsorption of Proteins to Gold Nanoparticles</a>
		<a href="#">NHS</a>	Covalent conjugation to primary amines, increased stability, less non-specific protein binding.	<a href="#">Conjugation of proteins to NHS-activated gold nanoparticles</a>
		<a href="#">Maleimide</a>	Covalent conjugation to thiol groups, increased stability, less non-specific protein binding.	-
		<a href="#">Carboxyl</a>	Covalent conjugation, increased stability, less non-specific protein binding.	<a href="#">Covalent conjugation of proteins to carboxyl gold nanoparticles</a>
		<a href="#">Amine</a>	Conjugation of carboxylated ligands	-
Modification with thiolated ligands (PEG-SH etc.)	5nm-100nm	<a href="#">standard (citrate)</a>	Classic starting material, no additional stabilizers added	-
		<a href="#">stabilized (surfactant)</a>	Increased stability during functionalization but reduced kinetics	-
		<a href="#">standard (citrate)</a>	Ideal for conjugation of thiolated oligonucleotides to small particle sizes.	-
		<a href="#">OligoREADY™</a>	Ideal for conjugation of thiol modified oligos to particles between 5nm-100nm in diameter.	-
		<a href="#">Maleimide</a>	Ideal for covalent conjugation of thiol modified oligos to particles between 5nm-100nm in diameter.	-
Oligonucleotide Conjugation	5nm-100nm	<a href="#">NHS</a>	For covalent conjugation of amine functionalized oligonucleotides. Ideal when a linker is required between the gold surface and conjugated oligonucleotide.	-
		<a href="#">Protein conjugated gold nanoparticles (antibodies, streptavidin etc)</a>	Colorimetric straightforward detection (no equipment required) Generates a permanent label	<a href="#">Immunoblotting protocol for gold conjugates</a>
		<a href="#">Protein conjugated gold nanoparticles (antibodies, streptavidin etc)</a>	High contrast label	-
		<a href="#">Gold Size Standards</a>	Ideal for standardization of results between runs and experiments when analyzing particles in the 50nm-400nm range.	-
Immuno-dot blot/Western blot	5nm-20nm	<a href="#">Protein conjugated gold nanoparticles (antibodies, streptavidin etc)</a>	Colorimetric straightforward detection (no equipment required) Generates a permanent label	<a href="#">Immunoblotting protocol for gold conjugates</a>
Immunohistochemistry (TEM)	5nm-40nm	<a href="#">Protein conjugated gold nanoparticles (antibodies, streptavidin etc)</a>	High contrast label	-
Flow Cytometry	50nm-400nm	<a href="#">Gold Size Standards</a>	Ideal for standardization of results between runs and experiments when analyzing particles in the 50nm-400nm range.	-
Cellular Uptake	30nm-60nm	<a href="#">Transferrin gold conjugate</a>	Active uptake through endocytosis	-
		<a href="#">Standard (citrate)</a>	Non-specific cellular uptake	-
		Cationic gold (available upon request)	High efficiency non-specific cellular uptake	-
Darkfield Microscopy	50nm-100nm	<a href="#">Gold conjugates</a>	-	-
Lateral Flow/Dip-Stick Assays	30nm-80nm	<a href="#">Standard (citrate)</a>	Allows for development of rapid testing kit, point of care assays	<a href="#">Lateral flow immunoassays</a>
		<a href="#">NHS</a>		
		<a href="#">Carboxyl</a>		
		<a href="#">Amine</a>		
		<a href="#">Streptavidin</a>		
Tumor Targeting	30nm-80nm	<a href="#">methoxy-PEG</a>	Allows for passive targeting of certain tumors <i>in vivo</i> Inert material with low non-specific protein binding in serum	-
Light Microscopy	5nm-10nm	<a href="#">Gold secondary antibody conjugates</a>	Ability to label tissue sections for both light and electron microscopy. Alternative to peroxidase and PAP based stains. <a href="#">Sensitivity can be enhanced with silver enhancement techniques</a>	-
ELISA	5nm-30nm	<a href="#">Gold antibody conjugates</a>	Straightforward colorimetric detection	

[www.stratech.co.uk/cytodiagnostics-inc](http://www.stratech.co.uk/cytodiagnostics-inc)

www.stratech.co.uk  
+44 (0) 1638 782600  
orders@stratech.co.uk

 @stratech\_uk  
 @stratechscientificltd  
 @stratech-scientific-ltd

free delivery  
for uk  
universities



we offer a  
full product  
guarantee



outstanding  
technical  
support

