

Materials List for:

# A Method for Selecting Structure-switching Aptamers Applied to a Colorimetric Gold Nanoparticle Assay

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## Materials

Name	Company	Catalog Number	Comments
Dynabeads M280 Streptavidin	Invitrogen	112.06D	Compatible with DynaMag-2 Magnet
DynaMag-2 Magnet	Invitrogen	12321D	Compatible with Dynabeads M280 Streptavidin
Streptavidin Sepharose High Performance	GE Healthcare	17-5113-01	This is a high density streptavidin product for ssDNA preparation
Hydrocortisone	Sigma	H4001	≥98%
Progesterone	Sigma	P0130	≥99%
Cholic Acid	Sigma	C1129	≥98%
NanoDrop ND-1000	NanoDrop	ND-1000	Replaced by ND-2000 model
Tris Base	Promega	H5135	≥99.9%
Sodium Chloride	Sigma	S9888	≥99.5%
Magnesium Chloride Hexahydrate	Fluka	63068	≥98%
500 ml Filter System	Corning	430769	0.22 µm cellulose acetate membrane
DNA Library	Operon	Custom	HPLC purified
All other DNA	IDT	Custom	Capture probes and primers — desalted; Aptamers — HPLC
Thermomixer	Eppendorf	R	Any model with temperature and mixing speed control will work
PfuUltra II Fusion HotStart DNA Polymerase, 400 rxn	Agilent	600674	Taq polymerase can be used as well
Deoxynucleotide Mix, PCR-Grade	Agilent	200415	Other brands will work here
10x Cloned Pfu DNA Polymerase Buffer	Agilent	200532	This buffer was optimized for PfuUltra II polymerase
GeneAmp PCR System	Applied Biosystems	9700	Any model that allows researcher to open lid for cycle optimization will work
Agarose-LE	Ambion	AM9040	≥99.9%
Ethidium Bromide	Sigma	E-1510	Acute toxicity, inhalation; suspected carcinogen
Empty Synthesis Columns, 1 µm Expedite Style	Glen Research	20-0021-01	This model is ideal because of the Luer-Lok fitting to couple with syringe
Replacement Filters Expedite	Glen Research	20-0021-0F	1 µm size
Illustra NAP-25 Columns	GE Healthcare	17-0852-01	Any brand with DNA grade resin gel filtration column will work

Slide-A-Lyzer Dialysis Cassette	ThermoFisher Scientific	66205	2k MWCO used
Gold(III) chloride hydrate	Sigma	254169	99.999% purity is important
Sodium Citrate Dihydrate	SAFC	W302600	We have found that the compound produced from different manufacturers greatly affects AuNP assays
SpectraMax	Molecular Devices	M5	Results were similar to Bio-TEK system
Synergy	Bio-TEK	HT	Results were similar to Molecular Devices system
HEPES Buffer	Amresco	J848	Any brand that makes a sterilized product will work
250 ml Filter System	Corning	430767	0.22 µm cellulose acetate membrane
UV Spectrophotometer	Varian	Cary 300	Other brands will work here
5 ml Syringe	Becton-Dickinson	309646	This model is ideal because of the Luer-Lok fitting to couple with Expedite column
ThermoEC Minicell Primo	ThermoFisher Scientific	EC320	Compatible with Power Supply
Power Supply	Fisher Scientific	FB300	Compatible with ThermoEC Minicell Primo
Dimethyl Sulfoxide	Sigma	D8418	Flammable liquid
2-Methoxynaphthalene	Sigma	148245	99%
Assay Plate	Corning	3370	96-well Flat Bottom, Sterile