

Materials List for:

# Phthalic Acid Ester-Binding DNA Aptamer Selection, Characterization, and Application to an Electrochemical Aptasensor

Xiao Wu<sup>\*1</sup>, Donglin Diao<sup>\*1</sup>, Zhangwei Lu<sup>\*1</sup>, Yu Han<sup>1</sup>, Shi Xu<sup>2</sup>, Xinhui Lou<sup>1</sup>

<sup>1</sup>Department of Chemistry, Capital Normal University

<sup>2</sup>College of Life Sciences, Capital Normal University

\*These authors contributed equally

Correspondence to: Xinhui Lou at [xinhuilou@cnu.edu.cn](mailto:xinhuilou@cnu.edu.cn)

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## Materials

Name	Company	Catalog Number	Comments
UV-2550	Shimadzu, Japan		protocol, section 3.8.2
DNA Engine Thermal cycler, PTC0200	BIO-RAD		section 3.5.1.2 and 3.5.2
C1000 Touch	BIO-RAD		section 5.3.6 and 6.3
VMP3 multichannel potentiostat	Bio-Logic Science, Claix, France		section 7.4, 7.8 and 7.11
Epoxy-activated Sepharose 6B	GE Healthcare (Piscataway, NJ, USA)	10220020	agarose beads, section 2.3 and 3.3
Dynabeads M-270 carboxylic acid magnetic beads	Invitrogen, USA	420420	magnetic beads, section 5.2. and 5.3
Premix Taq Hot Start Version	Takara, Dalian, China	R028A	polymerase, section 3.5.1.1
PARAFILM Sealing Membrane	Bemis, USA	PM-996	section 3.6.5
Lambda Exonuclease	Invitrogen, USA	EN0561	section 3.7.1.2. The 10 × reaction buffer is provided along with λ exonuclease by the provider.
Dr. GenTLE Precipitation Carrier	Takara, Dalian, China	9094	section 3.6.2 and 3.8.1
UNI-Q-10 PAGE DNA recovery kit	Sangon Biotech (Shanghai)	B511135	section 4.2
SYBR Gold nucleic acid gel stain	Invitrogen, USA	1811838	nucleic acid stain dye, section 3.5.1.5
SYBR Premix Ex Taq II	Takara, Dalian, China	RR820A	polymerase mix containing polymerase and dNTPs, section 5.3.5
2-(N-Morpholino)ethanesulfonic acid (MES)	Sigma-Aldrich	CAS: 1132-61-2	section 5.2.1
1-ethyl-3-(3-dimethylaminopropyl) carbodiimide hydrochloride (EDC)	Invitrogen, USA	CAS: 25952-53-8	section 5.2.2
N-hydroxysuccinimide (NHS)	Sigma-Aldrich	6066-82-6	section 5.2.3
mercaptohexanol (MCH)	Sigma-Aldrich	CAS: 1633-78-9	section 7.7
Gold electrode	Shanghai Chenhua	CHI101	section 7.4. - 7.11
tris(2-carboxyethyl) phosphine hydrochloride (TCEP)	Sigma-Aldrich	CAS: 51805-45-9	section 7.5
O-(2-Mercaptoethyl)-O'-methyl-hexa-(ethylene glycol)	Sigma-Aldrich	CAS: 651042-82-9	section 7.7
diethylhexyl phthalate (DEHP)	National Institute of Metrology, China	CAS: 117-81-7	section 7.11
Tween 20	Sigma-Aldrich	CAS: 9005-64-5	polyoxyethylene(20) sorbitan monolaurate

Triton X-100	Sigma-Aldrich	CAS: 9002-93-1	non-ionic surface active agent
PBS	Sigma-Aldrich	P5368	10 mM phosphate buffer containing 1 M NaCl, pH 7.4