

Materials List for:

Selection of Aptamers for Amyloid β -Protein, the Causative Agent of Alzheimer's Disease

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URL: <https://www.jove.com/video/1955>

DOI: [doi:10.3791/1955](https://doi.org/10.3791/1955)

Materials

Name	Company	Catalog Number	Comments
A β 40	UCLA Biopolymers Laboratory		Lyophilized powder
MX5 Automated-S Microbalance	Mettler Toledo		
Silicon-coated, 1.6-ml tubes	Denville Scientific	C19033 or C19035	
1,1,1,3,3,3-hexafluoro-2-propanol (HFIP)	TCI America	H0424	Use in a fume hood.
Ammonium persulfate	Sigma-Aldrich	A-7460	Vortex until the solution is clear. APS is prepared freshly each time and should be used within 48 h.
Tris(2,2-bipyridyl)dichlororuthenium(II) hexahydrate	Sigma-Aldrich	224758-1G	Vortex until the solution is clear. Cover the RuBpy tube with foil to protect the reagent from ambient light. RuBpy is prepared freshly each time and should be used within 48 h.
Dithiothreitol (DTT)	Sigma-Aldrich	43815	
D-Salt™ Excellulose™ desalting columns	Thermo Fisher Scientific, Inc.	20449	
Ammonium acetate	Fisher Scientific	A637-500	
Silicon-coated, 0.6-ml tubes	Denville Scientific	C19063	
Novex Tricine Gels (10–20%)	Invitrogen	EC6625B0X	10-well; mini size (8 cm X 8 cm); 25 μ l loading volume per well; separation range 5 kDa to 40 kDa
Quartz cuvette	Hellma	105.250-QS	
Beckman DU 640 spectrophotometer	Beckman Coulter Inc.		
ssDNA library	Integrated DNA Technologies	Custom-ordered	The library was designed to contain 49 random nucleotides flanked by two constant regions containing primer-binding and cloning sites: 5'-TAA TAC GAC TCA CTA TAG GGA ATT CCG CGT GTG C (N:25:25:25:25%) (N) ₄₉ G TCC GTT CGG GAT CCT C-3'
Taq DNA polymerase	USB Corp., Affymetrix	71160	Recombinant <i>Thermus aquaticus</i> DNA Polymerase supplied with 10 $\times$ PCR Buffer and a separate tube of 25 mM MgCl ₂ for routine PCR.
PCR Nucleotide Mix, 10 mM solution	USB Corp., Affymetrix	77212	(10 mM each dATP, dCTP, dGTP, dTTP)

Forward primer	Integrated DNA Technologies	Custom-ordered	5'-TAA TAC GAC TCA CTA TAG GGA ATT CCG CGT GTG C-3'
Reverse primer	Integrated DNA Technologies	Custom-ordered	5'-GAG GAT CCC GAA CGG AC-3'
Thermal cycler	Denville Scientific	Techne TC-312	
QIAquick PCR Purification Kit (50)	Qiagen	28104	
Agarose	Denville Scientific	CA3510-8	
Conical, sterile 1.6-ml tubes with caps attached with O-rings	Denville Scientific	C19040-S	
RiboMAX™ Large Scale RNA Production System–T7	Promega Corp.	P1300	The kit contains: 120 µl Enzyme Mix (RNA polymerase, recombinant RNasin® ribonuclease inhibitor and recombinant inorganic pyrophosphatase); 240 µl transcription 5 buffer; 100 µl each of 4 rNTPs, 100 mM; 110 U RQ1 RNase-free DNase, 1 U/µl; 10 µl linear control DNA, 1 mg/ml; 1 ml 3M sodium acetate (pH 5.2); 1.25 ml nuclease-Free water
α- ³² P-cytidine 5'-triphosphate, 250 µCi (9.25 MBq),	PerkinElmer, Inc.	BLU008H250UC	Specific Activity: 3000 Ci (111 TBq)/mmol, 50 mM Tricine (pH 7.6)
Citrate-saturated phenol:chloroform:isoamyl alcohol (125:24:1, pH 4.7)	Sigma-Aldrich	77619	
Chloroform:Isoamyl alcohol (24:1)	Sigma-Aldrich	C0549	
Absolute ethanol for molecular biology	Sigma-Aldrich	E7023	
Z216-MK refrigerated microcentrifuge	Denville Scientific	C0216-MK	
illustra ProbeQuant™ G-50 Micro Columns	GE Healthcare	Obtained from Fisher Scientific (45-001-487)	Prepacked with Sephadex™ G-50 DNA Grade and pre-equilibrated in STE buffer containing 0.15% Kathon as Biocide
Triathler Bench-top Scintillation counter	Hidex Oy, Turku, Finland	Triathler LSC Model: 425-034	
Novex® TBE-Urea Sample Buffer (2×)	Invitrogen	LC6876	
6% TBE-Urea Gels 1.0 mm, 10 wells	Invitrogen	EC6865BOX	
Novex® TBE Running Buffer (5×)	Invitrogen	LC6675	
Radioactivity decontaminant	Fisher Scientific	04-355-67	
Gel-loading tips	Denville Scientific	P3080	
XCell SureLock Mini-Cell	Invitrogen	EI0001	XCell SureLock Mini-Cell
Autoradiography film	Denville Scientific	E3018	Use in complete darkness
Autoradiography film, Hyperfilm™ ECL	Amersham	RPN3114K	Can be used under red safe light.
Membrane discs	EMD Millipore	GSWP02500	Mixed cellulose ester, hydrophilic, 0.22-µm disc membranes
Fritted glass support base for 125-ml flask	VWR international	26316-696	
Petri dishes	Fisher Scientific	08-757-11YZ	
Urea	Fisher Scientific	AC32738-0050	
EDTA	Fisher Scientific	118430010	

Glycogen	Sigma-Aldrich	G1767	
2-Propanol for molecular biology	Sigma-Aldrich	I9516	
Recombinant RNase inhibitor	USB Corp., Affymetrix	71571	
ImProm-II™ Reverse Transcription System	Promega Corp.	A3802	
Recombinant RNase inhibitor	USB Corp., Affymetrix	71571	
RapidRun™ Loading Dye	USB Corp., Affymetrix	77524	