

Materials List for:

Directed Evolution Method in *Saccharomyces cerevisiae*: Mutant Library Creation and Screening

Javier Viña-Gonzalez¹, David Gonzalez-Perez¹, Miguel Alcalde¹

¹Department of Biocatalysis, Institute of Catalysis, CSIC

Correspondence to: Miguel Alcalde at malcalde@icp.csic.es

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Materials

Name	Company	Catalog Number	Comments
1. Culture media			
Ampicillin sodium salt	Sigma-Aldrich	A0166	CAS N° 69-52-3 M.W. 371.39
Bacto Agar	Difco	214010	
Cloramphenicol	Sigma-Aldrich	C0378	CAS N° 56-75-7 M.W. 323.13
D-(+)-Galactose	Sigma-Aldrich	G0750	CAS N° 59-23-4 M.W. 180.16
D-(+)-Glucose	Sigma-Aldrich	G5767	CAS N° 50-99-7 M.W. 180.16
D-(+)-Raffinose pentahydrate	Sigma-Aldrich	83400	CAS N° 17629-30-0 M.W. 594.51
Peptone	Difco	211677	
Potassium phosphate monobasic	Sigma-Aldrich	P0662	CAS N° 7778-77-0 M.W. 136.09
Uracil	Sigma Aldrich	U1128	
Yeast Extract	Difco	212750	
Yeast Nitrogen Base without Amino Acids	Difco	291940	
Yeast Synthetic Drop-out Medium Supplements without uracil	Sigma-Aldrich	Y1501	
Name	Company	Catalog Number	Comments
2. PCR Reactions			
dNTP Mix	Agilent genomics	200415-51	25 mM each
iProof High-Fidelity DNA polymerase	Bio-rad	172-5301	
Manganese(II) chloride tetrahydrate	Sigma-Aldrich	M8054	CAS N° 13446-34-9 M.W. 197.91
Taq DNA Polymerase	Sigma-Aldrich	D4545	For error prone PCR
Name	Company	Catalog Number	Comments
3. Plasmid linearization			
BamHI restriction enzyme	New England Biolabs	R0136S	
Bovine Serum Albumin	New England Biolabs	B9001S	
XhoI restriction enzyme	New England Biolabs	R0146S	
Not I restriction enzyme	New England Biolabs	R0189S	
Gel Red	Biotium	41003	For staining DNA
Name	Company	Catalog Number	Comments
4. FOX assays			
Ammonium iron(II) sulfate hexahydrate	Sigma-Aldrich	F3754	CAS N° 7783-85-9 M.W. 392.14
Anysil Alcohol	Sigma Aldrich	W209902	CAS N° 105-13-5 M.W. 138.16
D-Sorbitol	Sigma-Aldrich	S1876	CAS N° 50-70-4 M.W. 182.17

Hydrogen peroxide 30%	Merck Millipore	1072090250	FOX standard curve
Xylenol Orange disodium salt	Sigma-Aldrich	52097	CAS N° 1611-35-4 M.W. 716.62
Name	Company	Catalog Number	Comments
5. Agarose gel stuff			
Agarose	Norgen	28035	CAS N° 9012-36-6
Gel Red	Biotium	41003	DNA analysis dye
GeneRuler 1kb Ladder	Thermo Scientific	SM0311	DNA M.W. standard
Loading Dye 6x	Thermo Scientific	R0611	
Low-melting temperature agarose	Bio-rad	161-3112	CAS N° 39346-81-1
Name	Company	Catalog Number	Comments
6. Kits and cells			
S. cerevisiae strain BJ5465	LGC Promochem	ATTC 208289	Protease deficient strain with genotype: MAT α ura3-52 trp1 leu2-delta1 his3-delta200 pep4::HIS3 prb1-delta1.6R can1 GAL
E. coli XL2-Blue competent cells	Agilent genomics	200150	For plasmid purification and amplification
NucleoSpin Gel and PCR Clean-up Kit	Macherey-Nagel	740,609,250	DNA gel extraction
NucleoSpin Plasmid Kit	Macherey-Nagel	740,588,250	Column miniprep Kit
Yeast Transformation Kit	Sigma-Aldrich	YEAST1-1KT	Included DNA carrier (Salmon testes)
Zymoprep yeast plasmid miniprep I	Zymo research	D2001	Plasmid extraction from yeast
Name	Company	Catalog Number	Comments
7. Plates			
96-well plates	Greiner Bio-One	655101	Clear, non-sterile, polystyrene (for activity measurements)
96-well plates	Greiner Bio-One	655161	Clear, sterile, polystyrene (for microfermentations)
96-well plate lid	Greiner Bio-One	656171	Clear, sterile, polystyrene (for microfermentations)