

Materials List for:

Genetic Mapping of Thermotolerance Differences Between Species of *Saccharomyces* Yeast via Genome-Wide Reciprocal Hemizyosity Analysis

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Materials

Name	Company	Catalog Number	Comments
1-2 plasmid Gigaprep kits	Zymo Research	D4204	The number of kits required depends on how efficient your preps are in each kit. This kit comes with 5 individual plasmid prep columns. Run 1 L of saturated <i>E. coli</i> culture through each prep column, as using more than 1 L per column can cause clogging of the prep filter, leading to low yield and poor quality DNA.
10X Tris-EDTA (TE) buffer (100 mM Tris-HCl and 10 mM EDTA)	Any	N/A	Filter sterilize through a 0.22 µm filter before use.
1M LiOAc	Any	N/A	Filter sterilize through a 0.22 µm filter before use.
300 mg/mL Geneticin (G418)	Gibco	11811023	
52% polyethylene glycol (PEG) 3350	Sigma	1546547	Dissolve in water and filter sterilize through a 0.22 µm filter before use. 1X trafo mix: 228 µL 52% PEG, 36 µL 1M LiOAc, 36 µL 10X TE buffer
Autoclaved LB liquid broth	BD Difco	244620	Make LB liquid broth using your powder from any brand, and milliQ water. Autoclave it before use.
Carbenicillin stock in water (100 mg/mL)	Any	N/A	Filter sterilize through a 0.22 µm filter before use.
Complete synthetic agar plates (24.1cm x 24.1cm) with 5-fluoroorotic acid (5-FOA) [0.2% drop-out amino acid mix without uracil or yeast nitrogen base (YNB), 0.005% uracil, 2% D-glucose, 0.67% YNB without amino acids, 0.075% 5-FOA]	5-FOA: Zymo Research, Drop-out mix: US Biological, Uracil: Sigma, D-glucose: Sigm), YNB: Difco	5-FOA: F9001-5, Drop-out mix: D9535, Uracil: U0750, D-glucose: G8270, YNB: DF0919	
DMSO	Any	N/A	
<i>E. coli</i> strain carrying pJR487 (CEN-/ARS+ piggyBac-containing plasmid)	N/A	N/A	Request from Brem lab.
Hybrid yeast strain JR507 (<i>S. cerevisiae</i> DBVPG1373 x <i>S. paradoxus</i> Z1, URA-/URA-)	N/A	N/A	Request from Brem lab.
Illumina HiSeq 2500			used for SE-150 reads
Large shaking incubators with variable temperature settings	Any	N/A	

LB + carbenicillin agar plates (100 µg/mL)	Agar: BD Difco	Agar: 214010	Make LB agar plates as normal and add carbenicillin to 100 µg/mL before drying.
Nanodrop spectrophotometer	Thermo Scientific	ND-2000	
Qubit Fluorimeter	Thermo Scientific	Q33240	
Salmon sperm DNA	Invitrogen	15632011	
Water bath at 39°C	Any	N/A	
Yeast fungal gDNA prep kit	Zymo Research	D6005	
Yeast peptone dextrose (YPD) liquid media	BD Difco	Peptone: 211677, Yeast Extract: 212750	Add filter-sterilized D-glucose to 2% after autoclaving.
YPD + G418 agar plates (300 µg/mL)	Agar: BD Difco	Agar: 214010	Make YPD agar plates as normal and add G418 to 300 µg/mL before drying.
YPD agar plates	Agar: BD Difco	Agar: 214010	