

Capturing Chromosome Conformation Across Length Scales

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Materials

Name	Company	Catalog Number	Comments
1 kb Ladder	New England Biolabs	N3232L	
Agarose	Invitrogen	16500100	
Agencourt AMPure XP magnetic beads , 60 mL	Beckman Coulter	A63881	
Amicon Ultra-0.5 Centrifugal Filter Unit (CFU)	EMD Millipore	UFC500396	
Annealing Buffer (5x)	See recipe in supplemental materials		
ATP 10 mM	ThermoFisher	R0441	
Avanti J-25i High Speed Refrigerated ultra-centrifuge	Beckman Coulter		
beckman ultracentrifuge tube 35 mL	Beckman Coulter	357002	
Binding Buffer (2x)	See recipe in supplemental materials		
biotin-14-dATP 0.4 mM	Invitrogen	19524-016	
BSA 10 mg/mL	New England Biolabs	B9000S	dilute from 20 mg/mL
Cell scraper	Falcon	353089	
Cell scraper	Corning	3008	
Conical polypropylene tubes 50 mL	Denville	C1062-P	
Conical tube 15 mL	Denville	C1017-P	
Covaris micro tube AFA fiber with snap-cap 130 µL	Covaris	520045/520077	
Covaris Sonicator	Covaris	E220/E220evolution/M220	
Culture flask 175 cm ²	Falcon	353112	
Culture plates 150 mm x 25 mm	Corning	430599	
dATP 1 mM	Invitrogen	56172	
dATP 10 mM	Invitrogen	56172	
dCTP 10 mM	Invitrogen	56173	
Ddel	New England Biolabs	R0175L	
dGTP 10 mM	Invitrogen	56174	
DMSO	Sigma	D2650-5x10ML	

dNTP mix 25 mM	Invitrogen	10297117	
Dounce homogenizer	DWK Life Sciences	8853010002/8853030002	
DPBS	Gibco	14190-144	
DpnII	New England Biolabs	R0543M	
DSG	ThermoScientific	20593	
dTTP 10 mM	Invitrogen	56175	
Ethanol 70%	Fisher	A409-4	Diluted from 100%
Ethidium Bromide	Fisher	BP1302-10	
Formaldehyde (37%)	Fisher	BP531-500	
Gel loading dye (6x)	New England Biolabs	B7024S	
Glycine in ultrapure water 2.5 M	Sigma	G8898-1KG	
HBSS	Gibco	14025-092	
Igepal CA-630 detergent	MP Biomedicals	198596	
Klenow DNA polymerase 5 U/μL	New England Biolabs	M0210L	
Klenow Fragment 3-->5' exo-, 5 U/μL	New England Biolabs	M0212L	
ligation buffer (10x)	New England Biolabs	B7203S	
Liquid nitrogen			
LoBind microcentrifuge tube 1.7 mL	Eppendorf	22431021	
Low Molecular Weight DNA Ladder	New England Biolabs	N3233L	
Lysis buffer	See recipe in supplemental materials		
Magnetic Particle separator	ThermoFisher	12321D	
Microfuge tubes 1.7 mL	Axygen	MCT-175-C	
MyOne Streptavidin C1 beads	Invitrogen	65001	
NEBuffer 2.1 (10x)	New England Biolabs	B7002S	
NEBuffer 3.1 (10x)	New England Biolabs	B7203S	
PBS	Gibco	70013-032	
PCR (strip) tubes	Biorad	TBS0201/ TCS0803	
PCR thermocycler	Biorad	T100	
Pfu Ultra II Buffer (10x)	Agilent		Comes with Pfu Ultra
PfuUltra II Fusion HS DNA Polymerase	Agilent	600674	
Phase lock tube 15 mL	Qiagen	129065	
Phase lock tubes 2 mL	Qiagen	129056	
Phenol:chloroform:isoamyl alcohol	Invitrogen	15593-049	
Protease inhibitor cocktail	ThermoFisher	78440	
Proteinase K in ultrapure water 10 mg/mL	Invitrogen	25530-031	
Refrigerated Centrifuge	Eppendorf	5810R	
RNase A, DNase and protease-free 10 mg/mL	Thermo Scientific	EN0531	
Rotator	Argos technologies	EW-04397-40 or rocking platform	
SDS 1%	Fisher	BP13111	
Sodium acetate pH = 5.2, 3 M	Sigma		
Sub-Cell GT Horizontal Electrophoresis System	Biorad	1704401	
T4 DNA ligase 1 U/μL	Invitrogen	100004817	
T4 DNA polymerase	New England Biolabs	M0203L	
T4 DNA polymerase	New England Biolabs	M0203L	
T4 DNA polymerase 3 U/μL	New England Biolabs	M0203L	

T4 ligation buffer (5x)	Invitrogen	Y90001	
T4 polynucleotide kinase 10 U/μL	New England Biolabs	M0201L	
Tabletop centrifuge	Eppendorf	5425	
TBE buffer	See recipe in supplemental materials		
Tris Low EDTA Buffer (TLE)	See recipe in supplemental materials		
Triton X-100 (10%)	Sigma	93443	
Truseq adapter oligos	Integrated DNA Technologies (IDT)	https://www.idtdna.com/site/order/oligoentry	250 nmole and HPLC purified
Tween 20 detergent	Fisher	9005-64-5	
Tween Wash Buffer	See recipe in supplemental materials		
Vortex	Scientific Industries	(G560)SI-0236	