

Materials List for:

# Amplification, Next-generation Sequencing, and Genomic DNA Mapping of Retroviral Integration Sites

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## Materials

Name	Company	Catalog Number	Comments
DMEM	Gibco	11965-084	Standard cell culture medium, compatible with HEK293T cells
Fetal Bovine Serum	Thermo Scientific	SH 30088.03	Different lots of serum may need to be pre-screened for optimal viral production
Penicillin/Streptomycin	Corning	30-002-CI	Antibiotics to be added to DMEM
Phosphate-Buffered saline	Mediatech	21-040-CV	Used to wash cells
Trypsin EDTA	Corning	25-053-CI	Used to detach adherent cells from tissue culture plates
PolyJet	SignaGen Laboratories	SL100688	DNA transfection reagent
0.45 µm Filters	Thermo Scientific	09-740-35B	Used to filter virus particle-containing cell culture media
Turbo DNase	Ambion	AM2239	Used to degrade carryover plasmid DNA from virus stocks
HIV-1 p24 Antigen Capture Assay	ABL Inc.	5447	Used to quantify yield of virus production
DNeasy Blood & Tissue Kit	Qiagen	69506	Used to purify genomic DNA from cells
Sonicator	Covaris	S2	With this model of sonicator perform two rounds of duty cycle, 5%; intensity, 3; cycles per burst, 200; time, 80 sec
Nuclease-Free Water	GeneMate	G-3250-125	Commercially-available water is recommended to reduce the possibility of sample cross-contamination
QIAQuick PCR Purification Kit	Qiagen	28106	Used to purify DNA during library construction
End-It DNA End-Repair Kit	Epicentre	ER81050	Used to repair DNA ends of sonicated DNA samples
Klenow Fragment (3'-5' exo-)	New England Biolabs (NEB)	M0212S	Used with dATP to A-tail repaired DNA fragments
dATP	Thermo Scientific	R0141	Deoxyadenosine triphosphate
MseI	NEB	R0525L	Restriction endonuclease for genomic DNA cleavage
BglII	NEB	R0144L	Restriction endonuclease to suppress amplification of upstream HIV-1 U5 sequence
T4 DNA Ligase	NEB	M0202L/6218	Enzyme for covalent joining of compatible DNA ends

DNA Oligonucleotides	Integrated DNA Technologies	custom	Have the company purify the oligos. HPLC purification suffices for DNAs <30 nucleotides; PAGE purify longer DNAs
Advantage 2 Polymerase Mix	Clontech	639202	Commercial mix containing DNA polymerase for PCR
dNTPs (100 mM solutions)	Thermo Scientific	R0181	Dilute the four chemicals on ice with sterile water to reach the intermediate working concentrations of 2.5 mM each dNTP
NanoDrop	Thermo Scientific	NanoDrop 2000	Spectrophotometer for determination of DNA concentration
Qubit Fluorimeter	Life Technologies	Qubit® 3.0	Fluorometer used to confirm integration site library DNA concentration
2200 TapeStation System	Agilent	G2964AA	Tape-based assay to confirm integration site library DNA size distribution
MiSeq	Illumina	SY-410-1003	Used for NGS