

Materials List for

The Zebrafish Tol2 System: A Modular and Flexible Gateway-Based Transgenesis Approach

John R. Klem¹, Raèden Gray¹, C. Ben Lovely¹

¹Alcohol Research Center, Department of Biochemistry and Molecular Genetics, University of Louisville

Corresponding Author

C. Ben Lovely

ben.lovely@louisville.edu

Citation

Klem, J.R., Gray, R., Lovely, C.B. The Zebrafish Tol2 System: A Modular and Flexible Gateway-Based Transgenesis Approach. *J. Vis. Exp.* (189), e64679, doi:10.3791/64679 (2022).

Date Published

November 30, 2022

DOI

10.3791/64679

URL

jove.com/video/64679

Materials

Name	Company	Catalog Number	Comments
Addgene Tol2 toolbox	https://www.addgene.org/kits/cole-tol2-neuro-toolbox/		
Air			Provided directly by the university
Ampicillin	Fisher Scientific	BP1760	
Analytical Balance	VWR	10204-962	
Borosil 1.0 mm OD x 0.75 mm ID Capillary	FHC	30-30-0	
Calcium Chloride	VWR	97062-590	
Chloramphenicol	BioVision	2486	
EDTA	Fisher Scientific	BP118-500	
Fluorescent Dissecting Microscope	Olympus	SZX16	
Kanamycin	Fisher Scientific	BP906	
Laser Scanning Confocal Microscope	Olympus	Fluoview FV1000	
Lawson Lab Donor Plasmid Prep	https://www.umassmed.edu/lawson-lab/reagents/lawson-lab-protocols/		
LB Agar	Fisher Scientific	BP9724	
LB Broth	Fisher Scientific	BP1426	
Low-EEO/Multi-Purpose/Molecular Biology Grade Agarose	Fisher Scientific	BP160-500	
LR Clonase II Plus Enzyme	Fisher Scientific	12538200	
Magnesium Sulfate (Heptahydrate)	Fisher Scientific	M63-500	
Micro Pipette holder	Applied Scientific Instrumentation	MIMPH-M-PIP	
Microcentrifuge tube 0.5 mL	VWR	10025-724	
Microcentrifuge tube 1.5 mL	VWR	10025-716	
Micromanipulator	Applied Scientific Instrumentation	MM33	
Micropipette tips 10 µL	Fisher Scientific	13611106	
Micropipette tips 1000 µL	Fisher Scientific	13611127	
Micropipette tips 200 µL	Fisher Scientific	13611112	

mMESSAGE mMACHINE SP6 Transcription Kit	Fisher Scientific	AM1340	
Mosimann Lab Tol2 Calculation Worksheet	https://www.protocols.io/view/multisite-gateway-calculations-excel-spreadsheet-8epv599p4g1b/v1		
NanoDrop Spectrophotometer	NanoDrop	ND-1000	
NcoI	NEB	R0189S	
NotI	NEB	R0189S	
Petri dishes 100 mm	Fisher Scientific	FB012924	
Phenol Red sodium salt	Sigma Aldrich	P4758-5G	
Pipetman L p1000L Micropipette	Gilson	FA10006M	
Pipetman L p200L Micropipette	Gilson	FA10005M	
Pipetman L p2L Micropipette	Gilson	FA10001M	
Potassium Chloride	Fisher Scientific	P217-500	
Potassium Phosphate (Dibasic)	VWR	BDH9266-500G	
Pressure Injector	Applied Scientific Instrumentation	MPPI-3	
QIAprep Spin Miniprep Kit	Qiagen	27106	
Sodium Bicarbonate	VWR	BDH9280-500G	
Sodium Chloride	Fisher Scientific	S271-500	
Sodium Phosphate (Dibasic)	Fisher Scientific	S374-500	
Stericup .22 µm vacuum filtration system	Millipore	SCGPU11RE	
Tol2 Wiki Page	http://tol2kit.genetics.utah.edu/index.php/Main_Page		
Top10 Chemically Competent <i>E. coli</i>	Fisher Scientific	C404010	
Vertical Pipetter Puller	David Kopf Instruments	720	
Zebrafish microinjection mold	Adaptive Science Tools	i34	