

Materials List for:

Preparation and Application of a New Bacterial Biosensor for the Presumptive Detection of Gunshot Residue

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Materials

Name	Company	Catalog Number	Comments
1,3-dinitrobenzene, 97%	Aldrich	D194255-25G	
2,4-dinitrotoluene, 97%	Aldrich	101397-5G	
Agar	Fisher Scientific	BP1423-500	
Ampicillin	Fisher Scientific	BP1760-5	
Antimony, Reference Standard Solution (1000ppm ±1%/Certified)	Fisher Scientific	SA450-100	Standard in dilute HNO ₃
Cut Smart Buffer	New England BioLabs	B7204S	
Duplex Buffer	Integrated DNA Technologies	11-01-03-00	
EcoRI-HF Restriction Enzyme	New England BioLabs	R3101S	
Ethanol, HPLC grade, denatured	Acros Organics	AC611050040	Solvents do not need to be HPLC grade, ACS or reagent grade will work.
Eurofins Genomics SimpleSeq DNA Sequencing Kits	Eurofins Genomics	SimpleSeq Kit Standard	
Forward primer for colony PCR	Integrated DNA Technologies		5'-GCCGCTTGAATTCGTCATATAT-3'
Forward primer for DNA sequencing	Integrated DNA Technologies		5'-GTAAAACGACGGCCAGTG-3'
IBI Science High Speed Plasmid Mini-kit	IBI Scientific	IB47101	
LB Broth, Miller	Fisher Scientific	BP1426-500	
Lead, Reference Standard Solution (1000ppm ±1%/Certified)	Fisher Scientific	SL21-100	Standard in dilute HNO ₃
LeadOff Disposable Cleaning and Decon Wipes	Hygenall	45NRCN	Sold in canisters or individually wrapped, any alcohol based wipe will work.
Methanol, HPLC grade	Fisher Scientific	A452-4	Solvents do not need to be HPLC grade, ACS or reagent grade will work.
NEB 5-alpha Competent <i>E. coli</i> cells	New England BioLabs	C2987I	
NheI-HF Restriction Enzyme	New England BioLabs	R3131S	
Nuclease free water	New England BioLabs	B1500S	
OneTaq 2X Master Mix with Standard Buffer	New England BioLabs	M0482S	
Plasmids from the registry of standard biological parts used for synthetic biology	Registry of Standard Biological Parts		http://parts.igem.org/Main_Page
Promoter Sequences	Integrated DNA Technologies		Sb promoter: 5'-GCATGAATTCA

			GTCATATATGTTTTGACTTATCC GCTTCGAAGAGAGAGACACTACCT GCAACAATCGCTAGCGCAT-3' 3'-CGTACTTAAGCTCACTATA TACAAAACTGAATAGGCGAAGC TTCTCTCTCTGTGATGGACGTTG TTAGCGATCGCGTA-5' Pb promoter: 5'-GCATGAATTCG TCTTGACTCTATAGTAACTAAGGG TGTATAATCGGCAACGCG AGCTAGCGCAT-3' 3'-CGTACTTAAGCAGAA CTGAGATATCATTGATCTCCACA TCTTAGCCGTTGCGCTGCGATCGC GTA-5' TNT promoter: 5'GCATTCTAGAT CAATTTATTTGAACAAGGCGGTCA ATTCTCTTCGATTTTATCTCTCGT AAAAAACGTGATACTCATCACAT CGACGAAACAACGTCACTTATACA AAAATCACCTGCGAGAGATTAATT GAATTCGCAT3' 3'CGTAAGATCTAGTTAA ATAAACTTGTTCCGCCAGTTAAGA GAAGCTAAATAGAGAGCATTTTT TTGCACTATGAGTAGTGTAGCTGC TTTGTTCAGTGAATATGTTTTTA GTGGACGCTCTCTAATTAACTTAA GCGTA5'
Reverse primer for colony PCR	Integrated DNA Technologies		5'- GCCGCTTGAATTCGTCTAGACT- 3'
Reverse primer for DNA sequencing	Integrated DNA Technologies		5'- GGAAACAGCTATGACCATG-3'
T4 DNA Ligase	New England BioLabs	M0202S	