

GENOTYPING BY PCR PROTOCOL
MUTANT MOUSE REGIONAL RESOURCE CENTER: UC DAVIS
mmrrc@ucdavis.edu
 530-754-MMRRC

NAME OF PCR: B6.129S4-*Spnb4*^{Gt(ROSA^{Betageo})62Sor}/Mmucd MMRRC # 000038-UCD

Protocol: (B-Geo Tcrd Duplex)

Reagent/ Constituent	Volume (μL)
Water	10.275
10x Buffer (contains 15mM MgCl ₂)	2.5
MgCl ₂ (stock concentration is 25mM)	1.7
Betaine (stock concentration is 5M) <i>Optional</i>	6.5
dNTPs (stock concentration is 10mM)	0.5
DMSO <i>Optional</i>	0.325
Primer 1 (stock concentration is 20μM) B-Geo F	0.8
Primer 2 (stock concentration is 20μM) B-Geo R	0.8
Primer 3 (stock concentration is 20μM) Tcrd F	0.2
Primer 4 (stock concentration is 20μM) Tcrd R	0.2
Taq Polymerase 5Units/μL	0.2
DNA extracted with ☐ NaOH ☒ Proteinase K ☐ Other:	1.0
TOTAL VOLUME OF REACTION:	25μL

Comments on protocol:

Use this generic protocol for BayGenomics ES Cell lines and other gene trap constructs. Primers amplify fragment between neomycin and β-galactosidase fusion vector element. TCRD is an internal control for presence of DNA.

Strategy:

Steps	Temp (°C)	Time (m:ss)	# of Cycles
1. Initiation/Melting HOT START? ☐	95	2:30	1
2. Denaturation	94	1:00	} 34x
3. Annealing	60	0:45	
4. Elongation	72	1:00	
5. Amplification	72	5:00	1
6. Finish	4	∞	n/a

Primers:

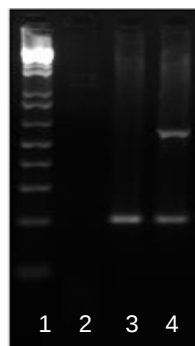
Name	Nucleotide Sequence (5' - 3')
1: B-Geo F	CAA ATG GCG ATT ACC GTT GA
2: B-Geo R	TGC CCA GTC ATA GCC GAA TA
3: Tcrd F	CAA ATG TTG CTT GTC TGG TG
4: Tcrd R	GTC AGT CGA GTG CAC AGT TT

Electrophoresis Protocol:

Agarose: 2% mV: 80

Estimated Running Time (min): 90

Expected Bands	Genotype
200 bp	WT +/+
200 / 581 bp	B-Geo +



Lanes:

- 1Kb+ ladder
- H₂O control
- Wild-type control
- B-Geo control