

GENOTYPING BY PCR PROTOCOL
MUTANT MOUSE REGIONAL RESOURCE CENTER: UC DAVIS

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 530-754-MMRRC

NAME OF PCR: B6.FVB(Cg)-Tg(Drd1a-cre)217Gsat/Mmcd **MMRRC #** 034258-UCD

DNA Extraction Method: NaOH Proteinase K Other: _____

Protocol:

Reagent/ Constituent	Volume (µL)
Water	11.275
10x Buffer	2.5
MgCl ₂ (25mM)	1.7
Betaine (5M)	6.5
dNTPs (10mM)	0.5
DMSO	0.325
Primer 1 (20µM)	0.5
Primer 2 (20µM)	0.5
Taq Polymerase (5 Units/µL)	0.2
DNA Sample	1.0
TOTAL VOLUME OF REACTION:	25µL

Comments on protocol:

- Use Touch-Down cycling protocol-first 10 cycles anneal at 65° C decreasing in temperature by 1.0° C; next 30 cycles anneal at 55° C.
- Betaine/DMSO is standardized due to high GC content in promoter regions and protocol may be tested without. Also, may adjust MgCl₂ to increase reaction or decrease non specific amplifications.

Strategy:

Steps	Temp (°C)	Time (m:ss)	# of Cycles
1. Initiation/Melting HOT START? CHECK HERE <input type="checkbox"/>	94	5:00	1
2. Denaturation	94	0:15	} 40x
3. Annealing } steps 2-3-4 will cycle in sequence	65 to 55 (↓1°C/cycle)	0:30	
4. Elongation	72	0:40	
5. Amplification	72	5:00	1
6. Finish	4	Hold	n/a

Primers:

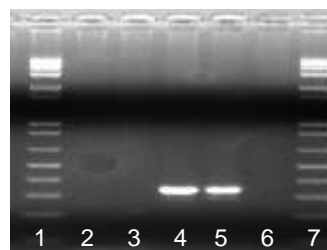
Name	Nucleotide Sequence (5' - 3')
1: Drd1a F1	GCT ATG GAG ATG CTC CTG ATG GAA
2: CreGS R1	CGGCAAACGGACAGAAGCATT

Electrophoresis Protocol:

% Agarose: 1.5 V: 90

Estimated Running Time (min): 90

Primer Combination	Band	Genotype
1 and 2	340 bp	transgenic



Lanes
 1 & 7: 1 kb+ ladder
 (Invitrogen, Cat. #10787-026)
 2: H₂O
 3: Wild Type Control
 4 & 5: Drd1a tg/+
 6: Other GENSAT line