GENOTYPING BY PCR PROTOCOL

MUTANT MOUSE RESOURCE & RESEARCH CENTER: UC DAVIS

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Protocol Name: B6J.Cg-Ptprctm1Holm Tg(ITGAL-Ptprca)BRasch/Mmucd **MMRRC:** 044051-UCD

Protocol:

Reagent/Constituent	Volume (µL)
Water	5.6
GoTaq® G2 Colorless Master Mix,2X	7.5
Primer 1. (stock concentration is 20µM)	0.45
Primer 2. (stock concentration is 20µM)	0.45
DNA (example) extracted w/ "Qiagen DNeasy columns or other similar silica based kits"	1.0
	TOTAL VOLUME
	15

Comments on protocol:

- Protocol may work with other DNA extraction methods.
- Use Touch-Down cycling protocol-first 10 cycles anneal at 65ºC decreasing in temperature by 1.0ºC; next 30 cycles anneal at 55ºC.
- Strains 44051, 46054, 46256, 46257, 46258, 46266, 46268, 46269, 46270 share similarities. PsatI digest distinguishes between Ptprca and Ptprca*. Primers 3 and 4 are to detect ΔC strain which is present in 26258.

Strategy:

Steps		Temp (ºC)	Time (m:ss)	# of Cycles
1. Initiation/Melting	HOT START? ☐	94	2:00	**1x**
2. Denaturation		94	0:10	
3. Annealing	steps 2-3-4 cycle in sequence	65 (↓1ºC/cycle)	0:30	**10x**
4. Elongation		68	2:00	
5. Denaturation		94	0:15	
6. Annealing	steps 5-6-7 cycle in sequence	55	0:30	**30X**
7. Elongation		68 (+20s/cycle)	2:00	

Primers:

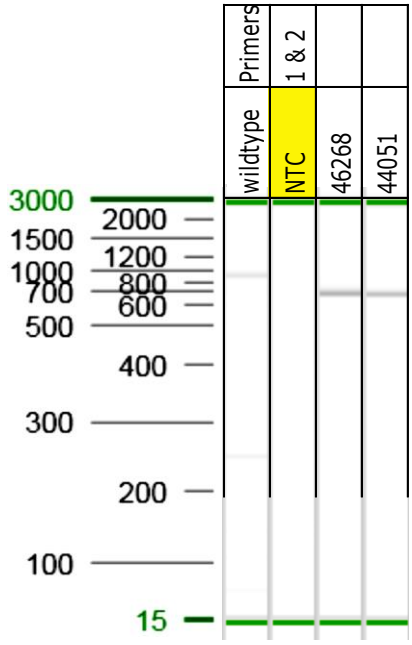
Name	Nucleotide Sequence (5' - 3')
1. 44051-CD363-F	GCCAGCTACATTGATGGCTTC
2. 44051-CD365-R	CCTGTATGAAGGAAGTCTCTGG
3. 44051-321-F	GGTCACTGGAATGAAAACCTCCCG
4. 44051-332-R	GCATAGGAAATGGCCATAGTC

Electrophoresis Protocol:

Argarose: **1.5%** V: **90**

Estimated Running:Time: **90** min.

Primer Combination	**Band** (bp)	Genotype
1 & 2	734	mutant
3 & 4	0	



PCR protocol developed by MMRRC at University of California, Davis

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PstI digest of primers 1 & 2 PCR product