

GENOTYPING BY PCR PROTOCOL
MUTANT MOUSE REGIONAL RESOURCE CENTER: UC DAVIS
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 530-754-MMRRC

NAME OF PCR: B6.129S4-*Ntrk2*^{tm1Rohr}/Mmucd MMRRC # 000188-UCD

Protocol:

Reagent/ Constituent	Volume (μL)
Water	17.15
10x Buffer (contains 15mM MgCl ₂)	2.5
MgCl ₂ (stock concentration is 25mM)	1.7
dNTPs (stock concentration is 10mM)	0.5
Primer 1 (stock concentration is 20μM) Trkb-n2	0.3
Primer 2 (stock concentration is 20μM) Trkb-c8	0.8
Primer 3 (stock concentration is 20μM) pgk3-1	0.8
Taq Polymerase 5Units/μL	0.25
DNA extracted with ☐ NaOH ☐ Proteinase K ☐ Other:	1.0
TOTAL VOLUME OF REACTION:	25μL

Comments on protocol:

TrkB is an older synonym of the gene *Ntrk2*. The generic Neo reaction (protocol below) will work with this line.

Strategy:

Steps	Temp (°C)	Time (m:ss)	# of Cycles
1. Initiation/Melting HOT START? ☐	94	3:00	1
2. Denaturation	94	1:00	} 40x
3. Annealing	65	1:30	
4. Elongation	72	1:30	
5. Amplification	72	7:00	1
6. Finish	4	∞	n/a

Primers:

Name	Nucleotide Sequence (5' - 3')
1: Trkb-n2	ATG TCG CCC TGG CTG AAG TG
2: Trkb-c8	ACT GAC ATC CGT AAG CCA GT
3: pgk3-1	GGT TCT AAG TAC TGT GGT TTC C

Electrophoresis Protocol:

Agarose: 2% mV: 80 Estimated Running Time: 90 min

Primer Combination	Band	Genotype
1 and 2	369 bp	WT +/+
2 and 3	179 bp	TrkBneo

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PCR protocol developed by MMRRC at University of California, Davis

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NAME OF PCR: B6.129S4-*Ntrk2*^{tm1Rohr}/Mmcd MMRRC # 000188-UCDDNA Extraction Method: ☐ NaOH ☒ Proteinase K ☐ Other: _____**Protocol: (Neo Tcrd Duplex)**

Reagent/ Constituent	Volume (μL)
Water	16.675
10x Buffer (contains 15mM MgCl ₂)	2.5
dNTPs (stock concentration is 10mM)	0.5
Primer 1 (stock concentration is 20μM) Neo TD F	1.0
Primer 2 (stock concentration is 20μM) Neo TD R	1.0
Primer 3 (stock concentration is 20μM) Tcrd F	0.6
Primer 4 (stock concentration is 20μM) Tcrd R	0.6
Taq Polymerase (5Units/μL)	0.125
DNA Sample	2.0
TOTAL VOLUME OF REACTION:	25μL

Comments on protocol:

TrkB is an older synonym of the gene *Ntrk2*. Only indicates the presence or absence of internal Neo vector; does not distinguish heterozygous vs. knockout, nor is it specific to any single construct. TCRD is an internal control to verify DNA is present.

Strategy:

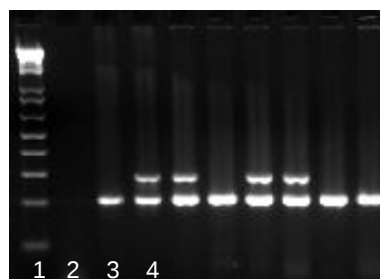
Steps	Temp (°C)	Time (m:ss)	# of Cycles
1. Initiation/Melting HOT START? ☐	94	3:00	1
2. Denaturation	94	0:20	} 12x
3. Annealing	64	0:30	
4. Elongation	72	0:35	
5. Denaturation	94	0:20	} 25x
6. Annealing	58	0:30	
7. Elongation	72	0:35	
8. Amplification	72	2:00	1
9. Finish	10	∞	n/a

Primers:

Primer Name	Nucleotide Sequence (5' - 3')
1: Neo TD F	CTT GGG TGG AGA GGC TAT TC
2: Neo TD R	AGG TGA GAT GAC AGG AGA TC
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: 80Estimated Running Time (min): 90

Expected Bands	Genotype
200 bp	WT +/-
280 bp	Neo +



Lanes:
 1. 1Kb+ ladder
 2. H₂O
 3. Wild-type +/-
 4. Neo +