Mouse Genotyping Protocol

Dasgupta Laboratory - Emory University

SCD1, SCD2, Cdh5-Cre, and tdTomato Reporter Lines

← All Protocols

Overview | Materials | DNA Extraction | PCR Setup | Mouse Lines

Protocol Overview

This protocol describes comprehensive genotyping procedures for transgenic mouse lines maintained in the Dasgupta Laboratory. Each mouse line requires specific primers and PCR conditions to accurately determine genotypes.

General Principles:

- Always include positive and negative controls
- Run wild-type and floxed/transgene primers in separate reactions unless noted
- Use fresh reagents and maintain sterile technique
- Document all results in laboratory notebook and database

🧬 Mouse Lines Covered

- **SCD1 Floxed** - Conditional knockout allele
- **SCD2 Floxed** - Conditional knockout allele
- **Cdh5-Cre** - Endothelial cell-specific Cre
- **tdTomato Reporter** - Rosa26-LSL-tdTomato

⏱️ Timeline

- **Day 1:** DNA extraction (~2-3 hours)
- **Day 2:** PCR setup and run (~3-4 hours)
- **Day 2:** Gel electrophoresis (~1 hour)
- **Total:** 2 days

⚠️ Important Notes:

- Tail samples are clipped and stored in -20°C freezer (arrivals bin)
- Change pipette tips between each sample to prevent cross-contamination
- Keep all reagents on ice during setup
- Store DNA samples at 4°C (not -20°C) for accessibility

About This Protocol

Comprehensive genotyping protocol for SCD1, SCD2, Cdh5-Cre, and tdTomato mouse lines. Developed and optimized for routine colony management.

Quick Links

← All Protocols

Protocol Overview

Troubleshooting

Contact

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