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Pole Test Protocol for Motor Function Assessment in Mice

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Roberto Garcia Swinburn[1], Ernest Arenas[1]

[1]Karolinska Institute Stockholm

SOX6 mDA differentiation

Roberto Garcia Swinburn
Karolinska Institute Stockholm

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Protocol status: Working
We use this protocol and it's working

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Abstract

This protocol was used to assess general motor skills and balance on grafted animals.

Guidelines

- Ensure consistent environmental conditions (noise, light, temperature).
- Use the **same pole and orientation** throughout the experiment.
- Observe for abnormal behaviors or jumping, which may invalidate a trial.

Troubleshooting

Training Phase (Minimum 2 Days Prior to Testing)

2d

1 Train animals for **at least 2 consecutive days** before the actual test. Each day, perform **3 mock trials per animal** using the same procedure as the test. Ensure mice are acclimated and capable of descending the pole.

2d

Test Day Procedure

2 Place the mouse **facing upwards** (head toward the top) on **top of the 20 cm vertical pole** (preferably inside the home cage).

3 Begin timing once the mouse rotates and orients downward (i.e., head pointing toward the ground).

4
- Allow the mouse to climb down naturally and stop time when mouse touches the floor. **If the mouse does not descend within 1 minute**, stop the trial and allow the animal to rest. *For incomplete or timed-out trials, repeat after a **minimum rest period of 10 minutes**.*

5 Perform a total of **3 successful trials per animal**.

Data Analysis

6 Calculate the **mean descent time** (in seconds) across the 3 valid trials for each animal.