Von Frey Test TCP_VFR_001

Purpose
To detect mechanical/tactile sensitivity in the mouse paw

Experimental Design
Minimum number of mutant animals: 7 males + 7 females

Age at test: 16 weeks

Sexual dimorphism:

Procedure

1. Baseline measurement
   1. Move the mice to the testing chambers and leave to acclimate for the specified length of time.
   2. Mice should be tested using the simplified up-down method (SUDO) of Bonin et al. (2014).
   3. When the mouse is still, apply the filament to the centre of the right hindpaw. Press the filament against the paw for 3 seconds.
   4. Mark the response '0' if the mouse does not react, or 'X' if it does react to the filament.
   5. Leave the mouse for a minimum of 2 minutes before presentation of the next filament.
   6. The next filament to be tested will depend on the response to the previous filament.
      • If the mice did respond to the previous filament, they should be tested with the filament of the next smallest size. Once tested, record the response.
      • If the mice did not respond to the previous filament, they should be tested with the filament of the next largest size. Once tested, record the response.
   8. Continue testing the mice until 5 trials have been completed.
   9. The procedure is then repeated for a second run.

3. Challenge
   1. The challenge is administered after the baseline measurement has been completed.

5. Test 1
   1. 22 hours after the challenge injection, re-test the mouse with the von Frey filaments using the same procedure as described for the baseline measurement.

7. Test 2
   1. 142 hours after the challenge injection, re-test the mouse with the von Frey filaments using the same procedure as described for the baseline measurement.

Notes
This procedure is a pilot study from the Pain Phenotyping Pilot


Parameters and Metadata

**Baseline: tabulation** TCP_VFR_001_001 | v1.0

- **seriesParameter**
- **Req. Analysis**: false  
  **Req. Upload**: true  
  **Is Annotated**: false
- **Increments**: Minimum 1

**Baseline: final score** TCP_VFR_002_001 | v1.0

- **seriesParameter**
- **Req. Analysis**: false  
  **Req. Upload**: true  
  **Is Annotated**: false
- **Increments**: Minimum 1

**Baseline: average final score** TCP_VFR_003_001 | v1.0

- **simpleParameter**
- **Req. Analysis**: false  
  **Req. Upload**: false  
  **Is Annotated**: false
- **Derivation**: meanOfIncrements('TCP_VFR_002_001',1)
Baseline: PWT force  
TCP_VFR_004_001 | v1.0

seriesParameter

Req. Analysis: false  
Req. Upload: true  
Is Annotated: false

Unit Measured: g

Increments: Minimum 1

Baseline: average PWT force  
TCP_VFR_005_001 | v1.0

simpleParameter

Req. Analysis: false  
Req. Upload: false  
Is Annotated: false

Unit Measured: g

Derivation: meanOfIncrements('TCP_VFR_004_001',1)

Test 1: tabulation  
TCP_VFR_006_001 | v1.0

seriesParameter

Req. Analysis: false  
Req. Upload: true  
Is Annotated: false

Increments: Minimum 1
Test 1: final score TCP_VFR_007_001 | v1.0

seriesParameter


Increments: Minimum 1

Test 1: average final score TCP_VFR_008_001 | v1.0

simpleParameter


Derivation: meanOfIncrements('TCP_VFR_007_001',1)

Test 1: PWT force TCP_VFR_009_001 | v1.0

seriesParameter


Unit Measured: g

Increments: Minimum 1
**Test 1: average PWT force** TCP_VFR_010_001 | v1.0

*simpleParameter*

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**Test 2: tabulation** TCP_VFR_011_001 | v1.0

*seriesParameter*

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**Test 2: final score** TCP_VFR_012_001 | v1.0

*seriesParameter*

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**Test 2: average final score** TCP_VFR_013_001 | v1.0

*simpleParameter*
Test 2: PWT force TCP_VFR_014_001 | v1.0  
seriesParameter

Unit Measured: g
Increments: Minimum 1

Test 2: average PWT force TCP_VFR_015_001 | v1.0  
simpleParameter

Unit Measured: g
Derivation: meanOfIncrements('TCP_VFR_014_001',1)

Challenge TCP_VFR_016_001 | v1.0  
procedureMetadata
Options: CFA,

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**Site of challenge injection**  
TCP_VFR_017_001 | v1.0

Options: Plantar surface of right hindpaw,

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**General anaesthetic for challenge injection**  
TCP_VFR_018_001 | v1.0

Options: Isoflurane,

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**Number of runs per test**  
TCP_VFR_019_001 | v1.0

Options: 2, 1,
**Number of trials per run** TCP_VFR_020_001 | v1.0  
procedureMetadata


Options: 5,

**Minimum interval between filament presentation** TCP_VFR_021_001 | v1.0  
procedureMetadata


Unit Measured: min

Options: 2,

**Number of repeats with same filament** TCP_VFR_022_001 | v1.0  
procedureMetadata


Options: Once, 2-3, if response not obvious in first 2 then 3rd performed,
**Minimum acclimatisation period** TCP_VFR_023_001 | v1.0

Unit Measured: Hours

Options: 1,

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**Paws tested** TCP_VFR_024_001 | v1.0

Options: Right hindpaw,

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**Time between baseline measurement and challenge** TCP_VF_R_025_001 | v1.0

Unit Measured: Hours

Options: 1, 2,
**Time between challenge and test 1**  
TCP_VFR_026_001 | v1.0

**procedureMetadata**

- **Req. Analysis:** false  
- **Req. Upload:** true  
- **Is Annotated:** false

**Unit Measured:** Hours

**Options:** 22, 24,

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**Time between challenge and test 2**  
TCP_VFR_027_001 | v1.0

**procedureMetadata**

- **Req. Analysis:** false  
- **Req. Upload:** true  
- **Is Annotated:** false

**Unit Measured:** Hours

**Options:** 142, 144,

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**Tetrad manufacturer**  
TCP_VFR_028_001 | v1.0

**procedureMetadata**

- **Req. Analysis:** false  
- **Req. Upload:** true  
- **Is Annotated:** false

**Options:** IITC,
**Tetrad dimensions** TCP_VFR_029_001 | v1.0

*procedureMetadata*

**Req. Analysis:** false  **Req. Upload:** true  **Is Annotated:** false

**Unit Measured:** cm

**Options:** 12.5 cm H x 10 cm W x 10 cm L,

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**Tetrad material** TCP_VFR_030_001 | v1.0

*procedureMetadata*

**Req. Analysis:** false  **Req. Upload:** true  **Is Annotated:** false

**Options:** Plexiglass,

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**Tetrad colour/opacity** TCP_VFR_031_001 | v1.0

*procedureMetadata*

**Req. Analysis:** false  **Req. Upload:** true  **Is Annotated:** false

**Options:** Clear,

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**Inset material** TCP_VFR_032_001 | v1.0
Inset colour/opacity TCP_VFR_033_001 | v1.0

Grid material TCP_VFR_034_001 | v1.0

Grid hole size TCP_VFR_035_001 | v1.0
Unit Measured: mm

Options: Hexagonal 8 mm corner to corner,

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**Filament set manufacturer** TCP_VFR_036_001 | v1.0

- **Req. Analysis:** false
- **Req. Upload:** true
- **Is Annotated:** false

Options: Aesthesio, Stoetling,

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**Filament set model** TCP_VFR_037_001 | v1.0

- **Req. Analysis:** false
- **Req. Upload:** true
- **Is Annotated:** false

Options: Aesthesio Precise Tactile Sensory Evaluator 20 piece kit,

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**Filament material** TCP_VFR_038_001 | v1.0

- **Req. Analysis:** false
- **Req. Upload:** true
- **Is Annotated:** false

Options: Nylon,
Range of filaments used (target force)  TCP_VFR_039_001 | v1.0

**Procedure Metadata**

- **Req. Analysis:** false
- **Req. Upload:** true
- **Is Annotated:** false

**Unit Measured:** g

**Options:** 0.02 - 1.4,

Starting filament (target force)  TCP_VFR_040_001 | v1.0

**Procedure Metadata**

- **Req. Analysis:** false
- **Req. Upload:** true
- **Is Annotated:** false

**Unit Measured:** g

**Options:** 0.16,

Starting filament (filament number)  TCP_VFR_041_001 | v1.0

**Procedure Metadata**

- **Req. Analysis:** false
- **Req. Upload:** true
- **Is Annotated:** false

**Options:** 5,
**Date filaments last calibrated** TCP_VFR_042_001 | v1.0

procedureMetadata

Req. Analysis: false  
Req. Upload: true  
Is Annotated: false

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**Experimenter ID** TCP_VFR_043_001 | v1.0

procedureMetadata

Req. Analysis: false  
Req. Upload: true  
Is Annotated: false

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**Disinfectant** TCP_VFR_044_001 | v1.0

procedureMetadata

Req. Analysis: false  
Req. Upload: false  
Is Annotated: false

**Options:** Clidox/Ethanol, Quaternary Ammonia (Coverage Plus),

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**Scaling parameter X** TCP_VFR_045_001 | v1.0

procedureMetadata

Req. Analysis: false  
Req. Upload: true  
Is Annotated: false

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Scaling parameter B TCP_VFR_046_001 | v1.0
procedureMetadata


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Testing methodology TCP_VFR_047_001 | v1.0
procedureMetadata


Options: SUDO,