**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

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

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

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

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

- **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


Unit Measured: g
Increments: Minimum 1

Baseline: average PWT force  TCP_VFR_005_001  | v1.0
simpleParameter


Unit Measured: g
Derivation: meanOfIncrements('TCP_VFR_004_001',1)

Test 1: tabulation  TCP_VFR_006_001  | v1.0
seriesParameter


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*

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

**Unit Measured:** g

**Derivation:** meanOfIncrements('TCP_VFR_009_001',1)

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

*seriesParameter*

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

**Increments:** Minimum 1

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

*seriesParameter*

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

**Increments:** Minimum 1

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

*simpleParameter*
Derivation: meanOfIncrements('TCP_VFR_012_001',1)

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
Site of challenge injection TCP_VFR_017_001 | v1.0

Options: Plantar surface of right hindpaw,

General anaesthetic for challenge injection TCP_VFR_018_001 | v1.0

Options: Isoflurane,

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


Options: 5,

Minimum interval between filament presentation TCP_VFR_021_001 | v1.0


Unit Measured: min

Options: 2,

Number of repeats with same filament TCP_VFR_022_001 | v1.0


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

- **Procedure Metadata**
  - **Requirement Analysis:** false
  - **Requirement Upload:** true
  - **Is Annotated:** false
  - **Unit Measured:** Hours
  - **Options:** 1,

**Paws tested** TCP_VFR_024_001 | v1.0

- **Procedure Metadata**
  - **Requirement Analysis:** false
  - **Requirement Upload:** true
  - **Is Annotated:** false
  - **Options:** Right hindpaw,

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

- **Procedure Metadata**
  - **Requirement Analysis:** false
  - **Requirement Upload:** true
  - **Is Annotated:** false
  - **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


Unit Measured: cm

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

Tetrad material TCP_VFR_030_001 | v1.0


Options: Plexiglass,

Tetrad colour/opacity TCP_VFR_031_001 | v1.0


Options: Clear,

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

**Options:** Clear, White,

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Grid material **TCP_VFR_034_001 | v1.0**

**Options:** Black painted metal,

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Grid hole size **TCP_VFR_035_001 | v1.0**

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Unit Measured: mm

Options: Hexagonal 8 mm corner to corner,

Filament set manufacturer TCP_VFR_036_001 | v1.0


Options: Aesthesio, Stoetling,

Filament set model TCP_VFR_037_001 | v1.0


Options: Aesthesio Precise Tactile Sensory Evaluator 20 piece kit,

Filament material TCP_VFR_038_001 | v1.0


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

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Unit Measured: g
Options: 0.02 - 1.4,

Starting filament (target force) TCP_VFR_040_001 | v1.0

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Unit Measured: g
Options: 0.16,

Starting filament (filament number) TCP_VFR_041_001 | v1.0

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

procedureMetadata

**Experimenter ID** TCP_VFR_043_001 | v1.0

procedureMetadata

**Disinfectant** TCP_VFR_044_001 | v1.0

procedureMetadata

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

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

procedureMetadata
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,