Whole blood peripheral blood leukocyte immunophenotyping MGP_PBI_001

Purpose

Whole blood peripheral blood leukocyte immunophenotyping

Procedure

Peripheral blood leukocyte assay is performed at 16 weeks of age (Mice were fed on Mouse Breeder Diet (5021, Labdiet) from weaning)

Non-fasted mice are terminally anaesthetised and blood is collected into EDTA coated tubes via the retro-orbital sinus. Whole blood is stained with two titrated cocktails of antibodies.

Panel 1 containing CD45, TCRab, TCRgd, CD161, CD4, CD8, CD25, CD44, CD62L and KLRG1.


Samples are fixed and red blood cells lysed prior to acquisition on a BD LSR II flow cytometer after running automated compensation using compbeads and BD FACSDiva software.

Data is analysed using FlowJo after singlet doublet discrimination, a time gate is used to exclude HTS issues and leukocytes identified with a SSC and CD45 gate. Total T cells, alpha beta T cells, CD4$^+$ alpha beta T cells, CD8$^+$ alpha beta T cells, gamma delta T cells, NKT cells, NK cells, B cells, monocytes, granulocytes and eosinophils are reported as percentage of leukocytes. CD4$^+$ CD25$^+$ regulatory alpha beta T cells, CD4$^+$ CD44$^+$ CD62L$^{lo}$ alpha beta T cells, CD4$^+$ KLRG1$^+$ alpha beta T cells, CD8$^+$ CD44$^+$ CD62L$^{lo}$ alpha beta T cells, CD8$^+$ KLRG1$^+$ alpha beta T cells, KLRG1$^+$ NK cells, IgD$^+$ B cells, Ly6C$^{hi}$ I-A/I-E$^{lo}$ monocytes and Ly6C$^{lo}$ I-A/I-E$^{lo}$ monocytes are reported as percentage of parent. Using the white blood cell count obtained from the haematology analysis absolute cell counts are derived for each population and reported as cells/ul.

Parameters and Metadata

Total T cell percentage MGP_PBI_001_001 | v1.0

simpleParameter
Description: total_t_cell_percentage

Alpha beta T cell percentage MGP_PBI_002_001 | v1.0

Description: alpha_beta_t_cell_percentage

CD4+ alpha beta T cell percentage MGP_PBI_003_001 | v1.0

Description: cd4_alpha_beta_t_cell_percentage

CD8+ alpha beta T cell percentage MGP_PBI_004_001 | v1.0
Unit Measured: %
Description: cd8_alpha_beta_t_cell_percentage

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**Gamma delta T cell percentage**  MGP_PBI_005_001 | v1.0  
simpleParameter

Unit Measured: %
Description: gamma_delta_t_cell_percentage

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**NKT cell percentage**  MGP_PBI_006_001 | v1.0  
simpleParameter

Unit Measured: %
Description: nkt_cell_percentage

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**NK cell percentage**  MGP_PBI_007_001 | v1.0  
simpleParameter
CD4+ CD25+ alpha beta regulatory T cell percentage  
*MGP_P BI_008_001 | v1.0*

**Description:** nk_cell_percentage

CD4+ CD44+ CD62L- alpha beta effector T cell percentage  
*MGP_PBI_009_001 | v1.0*

**Description:** cd4_cd25_alpha_beta_regulatory_t_cell_percentage

CD4+ CD44+ CD62L- alpha beta effector T cell percentage  
*MGP_PBI_009_001 | v1.0*

**Description:** cd4_cd44_cd62l_alpha_beta_effector_t_cell_percentage
CD8+ CD44+ CD62L- alpha beta effector T cell percentage

MGP_PBI_010_001 | v1.0

simpleParameter


Unit Measured: %

Description: cd8_cd44_cd62l_alpha_beta_effector_t_cell_percentage

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KLRG1+ mature NK cell percentage

MGP_PBI_011_001 | v1.0

simpleParameter


Unit Measured: %

Description: klr1_mature_nk_cell_percentage

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CD4+ KLRG1+ alpha beta T cell percentage

MGP_PBI_012_001 | v1.0

simpleParameter


Unit Measured: %

Description: cd4_klr1_alpha_beta_t_cell_percentage
CD8+ KLRG1+ alpha beta T cell percentage  MGP_PBI_013_001 | v1.0
simpleParameter


Unit Measured: %
Description: cd8_klrg1_alpha_beta_t_cell_percentage

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B cell percentage  MGP_PBI_014_001 | v1.0
simpleParameter


Unit Measured: %
Description: b_cell_percentage

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IgD+ mature B cell percentage  MGP_PBI_015_001 | v1.0
simpleParameter


Unit Measured: %
Description: igd_mature_b_cell_percentage

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**Monocyte percentage** MGP_PBI_016_001 | v1.0

*simpleParameter*


Unit Measured: %

Description: monocyte_percentage

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**Ly6Chigh monocyte percentage** MGP_PBI_017_001 | v1.0

*simpleParameter*


Unit Measured: %

Description: ly6chigh_monocyte_percentage

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**Ly6Clow monocyte percentage** MGP_PBI_018_001 | v1.0

*simpleParameter*

Unit Measured: %

Description: ly6clow_monocyte_percentage

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**Neutrophil percentage** MGP_PBI_019_001 | v1.0

simpleParameter


Unit Measured: %

Description: neutrophil_percentage

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**Eosinophil percentage** MGP_PBI_020_001 | v1.0

simpleParameter


Unit Measured: %

Description: eosinophil_percentage

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**Total T cell number** MGP_PBI_021_001 | v1.0

simpleParameter

Unit Measured: cells/ul
Description: total_t_cell_number

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**Alpha beta T cell number**  MGP_PBI_022_001 | v1.0

*simpleParameter*


Unit Measured: cells/ul
Description: alpha_beta_t_cell_number

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**CD4+ alpha beta T cell number**  MGP_PBI_023_001 | v1.0

*simpleParameter*


Unit Measured: cells/ul
Description: cd4_alpha_beta_t_cell_number

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**CD8+ alpha beta T cell number**  MGP_PBI_024_001 | v1.0

*simpleParameter*

**Unit Measured:** cells/ul

**Description:** cd8_alpha_beta_t_cell_number

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**Gamma delta T cell number**  MGP_PBI_025_001 | v1.0

*simpleParameter*

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

**Unit Measured:** cells/ul

**Description:** gamma_delta_t_cell_number

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**NKT cell number**  MGP_PBI_026_001 | v1.0

*simpleParameter*

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

**Unit Measured:** cells/ul

**Description:** nkt_cell_number

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**NK cell number**  MGP_PBI_027_001 | v1.0

*simpleParameter*
CD4+ CD25+ alpha beta regulatory T cell number  MGP_PBI_0  
28_001 | v1.0
simpleParameter

CD4+ CD44+ CD62L- alpha beta effector T cell number  MGP_PBI_029_001 | v1.0
simpleParameter
**CD8+ CD44+ CD62L- alpha beta effector T cell number**  
MGP_PBI_030_001 | v1.0

*simpleParameter*

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

**Unit Measured:** cells/ul

**Description:** cd8_cd44_cd62l_alpha_beta_effector_t_cell_number

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**KLRG1+ mature NK cell number**  
MGP_PBI_031_001 | v1.0

*simpleParameter*

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

**Unit Measured:** cells/ul

**Description:** klg1_mature_nk_cell_number

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**CD4+ KLRG1+ alpha beta T cell number**  
MGP_PBI_032_001 | v1.0

*simpleParameter*

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

**Unit Measured:** cells/ul

**Description:** cd4_klrg1_alpha_beta_t_cell_number
**CD8+ KLRG1+ alpha beta T cell number** MGP_PBI_033_001 | v1.0

**Description:** cd8_klr1_alpha_beta_t_cell_number

**Unit Measured:** cells/ul

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

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**B cell number** MGP_PBI_034_001 | v1.0

**Description:** b_cell_number

**Unit Measured:** cells/ul

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

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**IgD+ mature B cell number** MGP_PBI_035_001 | v1.0

**Description:** igd_mature_b_cell_number

**Unit Measured:** cells/ul

**Req. Upload:** true  **Req. Analysis:** false  **Is Annotated:** true
Monocyte number  MGP_PBI_036_001  | v1.0
simpleParameter


Unit Measured: cells/ul

Description: monocyte_number

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Ly6Chigh monocyte number  MGP_PBI_037_001  | v1.0
simpleParameter


Unit Measured: cells/ul

Description: ly6chigh_monocyte_number

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Ly6Clow monocyte number  MGP_PBI_038_001  | v1.0
simpleParameter


Unit Measured: cells/ul

Description: ly6clow_monocyte_number

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**Neutrophil number**  MGP_PBI_039_001  |  v1.0

*simpleParameter*

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

Unit Measured: cells/ul

Description: neutrophil_number

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**Eosinophil number**  MGP_PBI_040_001  |  v1.0

*simpleParameter*

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

Unit Measured: cells/ul

Description: eosinophil_number

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**Equipment manufacturer**  MGP_PBI_041_001  |  v1.0

*procedureMetadata*

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

Description: equipment_manufacturer

Options: BD Biosciences,
**Equipment model** MGP_PBI_042_001 | v1.0

*procedureMetadata*

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

**Description:** equipment_model

**Options:** LSR II,

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**Anesthesia used for blood collection** MGP_PBI_043_001 | v1.0

*procedureMetadata*

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

**Description:** anesthesia_used_for_blood_collection

**Options:** Injection narcosis with Ketamine (100mg/kg)/Xylazine (10mg/kg), Injection narcosis with Tribromoethanol (Avertin),

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**Comment** MGP_PBI_044_001 | v1.0

*simpleParameter*

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

**Description:** comment