# ALTERNATIVE - Mesenteric Lymph Node Immunophenotyping ALTMGP_MLN_001

## Parameters and Metadata

### ALTERNATIVE - Total T cells - % of CD45+ ALTMGP_MLN_001_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_t_cells_of_cd45

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### ALTERNATIVE - Total ab T cells - % of total T cells ALTMGP_MLN_002_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_ab_t_cells_of_total_t_cells

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## ALTERNATIVE - Total CD4+ T cells - % of ab T cells ALTMGP_MLN_003_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_cd4_t_cells_of_ab_t_cells

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## ALTERNATIVE - CD4+ T helper cells - % of CD4+ ALTMGP_MLN_004_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - cd4_t_helper_cells_of_cd4

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## ALTERNATIVE - Effector CD4+ T helper cells - % of CD4+ T helper cells ALTMGP_MLN_005_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_cd4_t_helper_cells_of_cd4_t_helper_cells

## ALTERNATIVE - Resting CD4+ T helper cells - % of CD4+ T helper cells ALTMGP_MLN_006_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_cd4_t_helper_cells_of_cd4_t_helper_cells

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## ALTERNATIVE - KLRG1+ CD4+ T helper cells - % of CD4+ T helper cells ALTMGP_MLN_007_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_cd4_t_helper_cells_of_cd4_t_helper_cells

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## ALTERNATIVE - Total Treg cells - % of CD4+ ALTMGP_MLN_008_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_treg_cells_of_cd4

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## ALTERNATIVE - Effector Treg cells - % of Treg ALTMGP_MLN_009_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_treg_cells_of_treg

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## ALTERNATIVE - Resting Treg cells - % of Treg ALTMGP_MLN_010_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_treg_cells_of_treg

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## ALTERNATIVE - KLRG1+ Treg cells - % of Treg ALTMGP_MLN_011_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_treg_cells_of_treg

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## ALTERNATIVE - Total CD8+ T cells - % of ab T cells ALTMGP_MLN_012_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_cd8_t_cells_of_ab_t_cells

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## ALTERNATIVE - Effector CD8+ T cells - % of CD8+ ALTMGP_MLN_013_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_cd8_t_cells_of_cd8

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## ALTERNATIVE - Resting CD8+ T cells - % of CD8+ ALTMGP_MLN_014_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_cd8_t_cells_of_cd8

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## ALTERNATIVE - Naive CD8+ T cells - % of CD8+ ALTMGP_MLN_015_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - naive_cd8_t_cells_of_cd8

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## ALTERNATIVE - KLRG1+ CD8+ T cells - % of CD8+ ALTMGP_MLN_016_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_cd8_t_cells_of_cd8

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## ALTERNATIVE - Total gd T cells - % of total T cells ALTMGP_MLN_017_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_gd_t_cells_of_total_t_cells

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## ALTERNATIVE - CD5+ gd T cells - % of gd T cells ALTMGP_MLN_018_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - cd5_gd_t_cells_of_gd_t_cells

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## ALTERNATIVE - Effector gd T cells - % of gd T cells ALTMGP_MLN_019_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_gd_t_cells_of_gd_t_cells

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## ALTERNATIVE - Resting gd T cells - % of gd T cells ALTMGP_MLN_020_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_gd_t_cells_of_gd_t_cells

---

## ALTERNATIVE - KLRG1+ gd T cells - % of gd T cells ALTMGP_MLN_021_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_gd_t_cells_of_gd_t_cells

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## ALTERNATIVE - Total NKT cells - % of CD45+ ALTMGP_MLN_022_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_nkt_cells_of_cd45

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## ALTERNATIVE - Total CD4- NKT cells - % of NKT cells ALTMGP_MLN_023_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_cd4_nkt_cells_of_nkt_cells

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## ALTERNATIVE - Effector CD4- NKT cells - % of CD4- NKT cells ALTMGP_MLN_024_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_cd4_nkt_cells_of_cd4_nkt_cells

## ALTERNATIVE - Resting CD4- NKT cells - % of CD4- NKT cells ALTMGP_MLN_025_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_cd4_nkt_cells_of_cd4_nkt_cells

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## ALTERNATIVE - KLRG1+ CD4- NKT cells - % of CD4- NKT cells ALTMGP_MLN_026_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_cd4_nkt_cells_of_cd4_nkt_cells

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## ALTERNATIVE - Total CD4+ NKT cells - % of NKT cells ALTMGP_MLN_027_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_cd4_nkt_cells_of_nkt_cells

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## ALTERNATIVE - Effector CD4+ NKT cells - % of CD4+ NKT cells ALTMGP_MLN_028_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_cd4_nkt_cells_of_cd4_nkt_cells

---

## ALTERNATIVE - Resting CD4+ NKT cells - % of CD4+ NKT cells ALTMGP_MLN_029_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_cd4_nkt_cells_of_cd4_nkt_cells

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## ALTERNATIVE - KLRG1+ CD4+ NKT cells - % of CD4+ NKT cells ALTMGP_MLN_030_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_cd4_nkt_cells_of_cd4_nkt_cells

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## ALTERNATIVE - Total NK cells - % of CD45+ ALTMGP_MLN_031_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_nk_cells_of_cd45

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## ALTERNATIVE - Effector NK cells - % of NK cells ALTMGP_MLN_032_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_nk_cells_of_nk_cells

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## ALTERNATIVE - Resting NK cells - % of NK cells ALTMGP_MLN_033_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_nk_cells_of_nk_cells

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## ALTERNATIVE - KLRG1+ NK cells - % of NK cells ALTMGP_MLN_034_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_nk_cells_of_nk_cells

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## ALTERNATIVE - Total B cells - % of CD45+ ALTMGP_MLN_035_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_b_cells_of_cd45

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## ALTERNATIVE - B1a cells - % of B cells ALTMGP_MLN_036_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - b1a_cells_of_b_cells

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## ALTERNATIVE - Total B2 cells - % of B cells ALTMGP_MLN_037_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_b2_cells_of_b_cells

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## ALTERNATIVE - Marginal zone B cells - % of B2 cells ALTMGP_MLN_038_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - marginal_zone_b_cells_of_b2_cells

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## ALTERNATIVE - Marginal zone precursor B cells - % of B2 cells ALTMGP_MLN_039_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - marginal_zone_precursor_b_cells_of_b2_cells

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## ALTERNATIVE - Transitional 1 B cells - % of B2 cells ALTMGP_MLN_040_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - transitional_1_b_cells_of_b2_cells

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## ALTERNATIVE - Transitional 2 B cells - % of B2 cells ALTMGP_MLN_041_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - transitional_2_b_cells_of_b2_cells

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## ALTERNATIVE - Follicular B cells - % of B2 cells ALTMGP_MLN_042_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - follicular_b_cells_of_b2_cells

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## ALTERNATIVE - Germinal centre B cells - % of B2 cells ALTMGP_MLN_043_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - germinal_centre_b_cells_of_b2_cells

## ALTERNATIVE - Early germinal centre B cells - % of B2 cells ALTMGP_MLN_044_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - early_germinal_centre_b_cells_of_b2_cells

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## ALTERNATIVE - Late germinal centre B cells - % of B2 cells ALTMGP_MLN_045_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - late_germinal_centre_b_cells_of_b2_cells

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## ALTERNATIVE - Plasma cells - % of B2 cells ALTMGP_MLN_046_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - plasma_cells_of_b2_cells

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## ALTERNATIVE - Memory B cells - % of B2 cells ALTMGP_MLN_047_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - memory_b_cells_of_b2_cells

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## ALTERNATIVE - B2 marginal zone + precursor cells - % of B2 cells ALTMGP_MLN_048_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - b2_marginal_zone_precursor_cells_of_b2_cells

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## ALTERNATIVE - B2 t1 + t2 cells - % of B2 cells ALTMGP_MLN_049_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - b2_t1_t2_cells_of_b2_cells

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## ALTERNATIVE - B2 t3 + f1 + f2 + gc cells - % of B2 cells ALTMGP_MLN_050_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - b2_t3_f1_f2_gc_cells_of_b2_cells

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## ALTERNATIVE - Total myeloid cells - % of CD45+ ALTMGP_MLN_051_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_myeloid_cells_of_cd45

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## ALTERNATIVE - Macrophages - % of myeloid cells ALTMGP_MLN_052_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - macrophages_of_myeloid_cells

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## ALTERNATIVE - Granulocytes + monocytes - % of myeloid cells ALTMGP_MLN_053_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - granulocytes_monocytes_of_myeloid_cells

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## ALTERNATIVE - Granulocytes - % of myeloid cells ALTMGP_MLN_054_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - granulocytes_of_myeloid_cells

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## ALTERNATIVE - Monocytes - % of myeloid cells ALTMGP_MLN_055_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - monocytes_of_myeloid_cells

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## ALTERNATIVE - Eosinophils - % of myeloid cells ALTMGP_MLN_056_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - eosinophils_of_myeloid_cells

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## ALTERNATIVE - Total DC - % of myeloid cells ALTMGP_MLN_057_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_dc_of_myeloid_cells

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## ALTERNATIVE - Plasmacytoid DC - % of DC ALTMGP_MLN_058_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - plasmacytoid_dc_of_dc

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## ALTERNATIVE - Conventional DC (cDC) - % of DC ALTMGP_MLN_059_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - conventional_dc_cdc_of_dc

---

## ALTERNATIVE - CD11b-high cDC - % of cDC ALTMGP_MLN_060_001 | v1.2

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - conventional_cd11b_type_dc_of_cdc

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## ALTERNATIVE - CD11b-low cDC - % of cDC ALTMGP_MLN_061_001 | v1.2

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - conventional_cd8a_type_dc_of_cdc

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## ALTERNATIVE - CD103+ CD11b-low cDC - % of CD11b-low cDC ALTMGP_MLN_062_001 | v1.2

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - cd103_cd8a_type_dc_of_cd8_type_cdc

## ALTERNATIVE - Total ab T cells - % of CD45+ ALTMGP_MLN_063_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_ab_t_cells_of_cd45

---

## ALTERNATIVE - Total CD4+ T cells - % of CD45+ ALTMGP_MLN_064_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_cd4_t_cells_of_cd45

---

## ALTERNATIVE - CD4+ T helper cells - % of CD45+ ALTMGP_MLN_065_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - cd4_t_helper_cells_of_cd45

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## ALTERNATIVE - Effector CD4+ T helper cells - % of CD45+

ALTMGP_MLN_066_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_cd4_t_helper_cells_of_cd45

---

## ALTERNATIVE - Resting CD4+ T helper cells - % of CD45+

ALTMGP_MLN_067_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_cd4_t_helper_cells_of_cd45

---

## ALTERNATIVE - KLRG1+ CD4+ T helper cells - % of CD45+ ALTMGP_MLN_068_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_cd4_t_helper_cells_of_cd45

---

## ALTERNATIVE - Total Treg cells - % of CD45+ ALTMGP_MLN_069_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_treg_cells_of_cd45

---

## ALTERNATIVE - Effector Treg cells - % of CD45+ ALTMGP_MLN_070_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_treg_cells_of_cd45

---

## ALTERNATIVE - Resting Treg cells - % of CD45+ ALTMGP_MLN_071_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_treg_cells_of_cd45

---

## ALTERNATIVE - KLRG1+ Treg cells - % of CD45+ ALTMGP_MLN_072_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_treg_cells_of_cd45

---

## ALTERNATIVE - Total CD8+ T cells - % of CD45+ ALTMGP_MLN_073_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_cd8_t_cells_of_cd45

---

## ALTERNATIVE - Effector CD8+ T cells - % of CD45+ ALTMGP_MLN_074_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_cd8_t_cells_of_cd45

---

## ALTERNATIVE - Resting CD8+ T cells - % of CD45+ ALTMGP_MLN_075_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_cd8_t_cells_of_cd45

---

## ALTERNATIVE - Naive CD8+ T cells - % of CD45+ ALTMGP_MLN_076_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - naive_cd8_t_cells_of_cd45

---

## ALTERNATIVE - KLRG1+ CD8+ T cells - % of CD45+ ALTMGP_MLN_077_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_cd8_t_cells_of_cd45

---

## ALTERNATIVE - Total gd T cells - % of CD45+ ALTMGP_MLN_078_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_gd_t_cells_of_cd45

---

## ALTERNATIVE - CD5+ gd T cells - % of CD45+ ALTMGP_MLN_079_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - cd5_gd_t_cells_of_cd45

---

## ALTERNATIVE - Effector gd cells - % of CD45+ ALTMGP_MLN_080_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_gd_cells_of_cd45

---

## ALTERNATIVE - Resting gd T cells - % of CD45+ ALTMGP_MLN_081_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_gd_t_cells_of_cd45

## ALTERNATIVE - KLRG1+ gd T cells - % of CD45+ ALTMGP_MLN_082_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_gd_t_cells_of_cd45

---

## ALTERNATIVE - Total CD4- NKT cells - % of CD45+ ALTMGP_MLN_083_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_cd4_nkt_cells_of_cd45

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## ALTERNATIVE - Effector CD4- NKT cells - % of CD45+ ALTMGP_MLN_084_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_cd4_nkt_cells_of_cd45

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## ALTERNATIVE - Resting CD4- NKT cells - % of CD45+ ALTMGP_MLN_085_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_cd4_nkt_cells_of_cd45

---

## ALTERNATIVE - KLRG1+ CD4- NKT cells - % of CD45+ ALTMGP_MLN_086_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_cd4_nkt_cells_of_cd45

---

## ALTERNATIVE - Total CD4+ NKT cells - % of CD45+ ALTMGP_MLN_087_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_cd4_nkt_cells_of_cd45

---

## ALTERNATIVE - Effector CD4+ NKT cells - % of CD45+ ALT

MGP_MLN_088_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_cd4_nkt_cells_of_cd45

---

## ALTERNATIVE - Resting CD4+ NKT cells - % of CD45+ ALT

MGP_MLN_089_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_cd4_nkt_cells_of_cd45

---

## ALTERNATIVE - KLRG1+ CD4+ NKT cells - % of CD45+ ALTMGP_MLN_090_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_cd4_nkt_cells_of_cd45

---

## ALTERNATIVE - Effector NK cells - % of CD45+ ALTMGP_MLN_091_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - effector_nk_cells_of_cd45

---

## ALTERNATIVE - Resting NK cells - % of CD45+ ALTMGP_MLN_092_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - resting_nk_cells_of_cd45

---

## ALTERNATIVE - KLRG1+ NK cells - % of CD45+ ALTMGP_MLN_093_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - klrg1_nk_cells_of_cd45

---

## ALTERNATIVE - B1a cells - % of CD45+ ALTMGP_MLN_094_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - b1a_cells_of_cd45

---

## ALTERNATIVE - Total B2 cells - % of CD45+ ALTMGP_MLN_095_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_b2_cells_of_cd45

---

## ALTERNATIVE - Marginal zone B cells - % of CD45+ ALTMGP_MLN_096_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - marginal_zone_b_cells_of_cd45

---

## ALTERNATIVE - Marginal zone precursor B cells - % of CD45+ ALTMGP_MLN_097_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - marginal_zone_precursor_b_cells_of_cd45

---

## ALTERNATIVE - Transitional 1 B cells - % of CD45+ ALTMGP_MLN_098_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - transitional_1_b_cells_of_cd45

---

## ALTERNATIVE - Transitional 2 B cells - % of CD45+ ALTMGP_MLN_099_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - transitional_2_b_cells_of_cd45

---

## ALTERNATIVE - Follicular B cells - % of CD45+ ALTMGP_MLN_100_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - follicular_b_cells_of_cd45

## ALTERNATIVE - Germinal centre B cells - % of CD45+ ALTMGP_MLN_101_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - germinal_centre_b_cells_of_cd45

---

## ALTERNATIVE - Early germinal centre B cells - % of CD45+ ALTMGP_MLN_102_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - early_germinal_centre_b_cells_of_cd45

---

## ALTERNATIVE - Late germinal centre B cells - % of CD45+

ALTMGP_MLN_103_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - late_germinal_centre_b_cells_of_cd45

---

## ALTERNATIVE - Plasma cells - % of CD45+ ALTMGP_MLN_104_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - plasma_cells_of_cd45

---

## ALTERNATIVE - Memory B cells - % of CD45+ ALTMGP_MLN_105_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - memory_b_cells_of_cd45

---

## ALTERNATIVE - B2 marginal zone + precursor cells - % of CD45+ ALTMGP_MLN_106_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - b2_marginal_zone_precursor_cells_of_cd45

---

## ALTERNATIVE - B2 t1 + t2 cells - % of CD45+ ALTMGP_MLN_107_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - b2_t1_t2_cells_of_cd45

---

## ALTERNATIVE - B2 t3 + f1+ f2 + gc cells - % of CD45+ ALTMGP_MLN_108_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - b2_t3_f1_f2_gc_cells_of_cd45

---

## ALTERNATIVE - Macrophages - % of CD45+ ALTMGP_MLN_109_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - macrophages_of_cd45

---

## ALTERNATIVE - Granulocytes + monocytes - % of CD45+

ALTMGP_MLN_110_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - granulocytes_monocytes_of_cd45

---

## ALTERNATIVE - Granulocytes - % of CD45+ ALTMGP_MLN_111_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - granulocytes_of_cd45

---

## ALTERNATIVE - Monocytes - % of CD45+ ALTMGP_MLN_112_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - monocytes_of_cd45

---

## ALTERNATIVE - Eosinophils - % of CD45+ ALTMGP_MLN_113_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - eosinophils_of_cd45

---

## ALTERNATIVE - Total DC - % of CD45+ ALTMGP_MLN_114_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - total_dc_of_cd45

---

## ALTERNATIVE - Plasmacytoid DC - % of CD45+ ALTMGP_MLN_115_001 | v1.0

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - plasmacytoid_dc_of_cd45

---

## ALTERNATIVE - Conventional DC (cDC) - % of CD45+ ALTMGP_MLN_116_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - conventional_dc_of_cd45

---

## ALTERNATIVE - CD11b-high cDC - % of CD45+ ALTMGP_MLN_117_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - conventional_cd11b_type_dc_of_cd45

---

## ALTERNATIVE - CD11b-low cDC - % of CD45+ ALTMGP_MLN_118_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - conventional_cd8a_type_dc_of_cd45

---

## ALTERNATIVE - CD103+ CD11b-low cDC - % of CD45+ ALTMGP_MLN_119_001 | v1.1

simpleParameter

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

**Unit Measured:** %

**Description:** ALTERNATIVE - cd103_cd8a_type_dc_of_cd45

## ALTERNATIVE - T cell panel CD45+ live cell count ALTMGP_MLN_120_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - t_cell_panel_cd45_live_cell_count

---

## ALTERNATIVE - B cell panel CD45+ live cell count ALTMGP_MLN_121_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - b_cell_panel_cd45_live_cell_count

---

## ALTERNATIVE - Myeloid panel CD45+ live cell count ALTMGP_MLN_122_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - myeloid_panel_cd45_live_cell_count

## ALTERNATIVE - Total T cells - cell count ALTMGP_MLN_123_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_t_cells_cell_count

---

## ALTERNATIVE - Total ab T cells - cell count ALTMGP_MLN_124_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_ab_t_cells_cell_count

---

## ALTERNATIVE - Total CD4+ T cells - cell count ALTMGP_MLN_125_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_cd4_t_cells_cell_count

---

## ALTERNATIVE - CD4+ T helper cells - cell count ALTMGP_MLN_126_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - cd4_t_helper_cells_cell_count

---

## ALTERNATIVE - Effector CD4+ T helper cells - cell count ALTMGP_MLN_127_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - effector_cd4_t_helper_cells_cell_count

---

## ALTERNATIVE - Resting CD4+ T helper cells - cell count ALTMGP_MLN_128_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - resting_cd4_t_helper_cells_cell_count

---

## ALTERNATIVE - KLRG1+ CD4+ T helper cells - cell count

ALTMGP_MLN_129_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - klrg1_cd4_t_helper_cells_cell_count

---

## ALTERNATIVE - Total Treg cells - cell count ALTMGP_MLN_130_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_treg_cells_cell_count

---

## ALTERNATIVE - Effector Treg cells - cell count ALTMGP_MLN_131_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - effector_treg_cells_cell_count

---

## ALTERNATIVE - Resting Treg cells - cell count ALTMGP_MLN_132_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - resting_treg_cells_cell_count

---

## ALTERNATIVE - KLRG1+ Treg cells - cell count ALTMGP_MLN_133_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - klrg1_treg_cells_cell_count

---

## ALTERNATIVE - Total CD8+ T cells - cell count ALTMGP_MLN_134_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_cd8_t_cells_cell_count

---

## ALTERNATIVE - Effector CD8+ T cells - cell count ALTMGP_MLN_135_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - effector_cd8_t_cells_cell_count

---

## ALTERNATIVE - Resting CD8+ T cells - cell count ALTMGP_MLN_136_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - resting_cd8_t_cells_cell_count

---

## ALTERNATIVE - Naive CD8+ T cells - cell count ALTMGP_MLN_137_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - naive_cd8_t_cells_cell_count

---

## ALTERNATIVE - KLRG1+ CD8+ T cells - cell count ALTMGP_MLN_138_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - klrg1_cd8_t_cells_cell_count

---

## ALTERNATIVE - Total gd T cells - cell count ALTMGP_MLN_139_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_gd_t_cells_cell_count

---

## ALTERNATIVE - CD5+ gd T cells - cell count ALTMGP_MLN_140_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - cd5_gd_t_cells_cell_count

---

## ALTERNATIVE - Effector gd T cells - cell count ALTMGP_MLN_141_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - effector_gd_t_cells_cell_count

---

## ALTERNATIVE - Resting gd T cells - cell count ALTMGP_MLN_142_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - resting_gd_t_cells_cell_count

---

## ALTERNATIVE - KLRG1+ gd T cells - cell count ALTMGP_MLN_143_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - klrg1_gd_t_cells_cell_count

---

## ALTERNATIVE - Total NKT cells - cell count ALTMGP_MLN_144_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_nkt_cells_cell_count

---

## ALTERNATIVE - Total CD4- NKT cells - cell count ALTMGP_MLN_145_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_cd4_nkt_cells_cell_count

---

## ALTERNATIVE - Effector CD4- NKT cells - cell count ALTMGP_MLN_146_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - effector_cd4_nkt_cells_cell_count

---

## ALTERNATIVE - Resting CD4- NKT cells - cell count ALTMGP_MLN_147_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - resting_cd4_nkt_cells_cell_count

---

## ALTERNATIVE - KLRG1+ CD4- NKT cells - cell count ALTMGP_MLN_148_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - klrg1_cd4_nkt_cells_cell_count

---

## ALTERNATIVE - Total CD4+ NKT cells - cell count ALTMGP_MLN_149_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_cd4_nkt_cells_cell_count

---

## ALTERNATIVE - Effector CD4+ NKT cells - cell count ALTMG

P_MLN_150_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - effector_cd4_nkt_cells_cell_count

---

## ALTERNATIVE - Resting CD4+ NKT cells - cell count ALTMG

P_MLN_151_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - resting_cd4_nkt_cells_cell_count

---

## ALTERNATIVE - KLRG1+ CD4+ NKT cells - cell count ALTM

GP_MLN_152_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - klrg1_cd4_nkt_cells_cell_count

---

## ALTERNATIVE - Total NK cells - cell count ALTMGP_MLN_153_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_nk_cells_cell_count

---

## ALTERNATIVE - Effector NK cells - cell count ALTMGP_MLN_154_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - effector_nk_cells_cell_count

---

## ALTERNATIVE - Resting NK cells - cell count ALTMGP_MLN_155_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - resting_nk_cells_cell_count

---

## ALTERNATIVE - KLRG1+ NK cells - cell count ALTMGP_MLN_156_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - klrg1_nk_cells_cell_count

---

## ALTERNATIVE - Total B cells - cell count ALTMGP_MLN_157_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_b_cells_cell_count

---

## ALTERNATIVE - B1a cells - cell count ALTMGP_MLN_158_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - b1a_cells_cell_count

---

## ALTERNATIVE - Total B2 cells - cell count ALTMGP_MLN_159_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_b2_cells_cell_count

---

## ALTERNATIVE - Marginal zone B cells - cell count ALTMGP_MLN_160_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - marginal_zone_b_cells_cell_count

---

## ALTERNATIVE - Marginal zone precursor B cells - cell count ALTMGP_MLN_161_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - marginal_zone_precursor_b_cells_cell_count

---

## ALTERNATIVE - Transitional 1 B cells - cell count ALTMGP_MLN_162_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - transitional_1_b_cells_cell_count

---

## ALTERNATIVE - Transitional 2 B cells - cell count ALTMGP_MLN_163_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - transitional_2_b_cells_cell_count

---

## ALTERNATIVE - Follicular B cells - cell count ALTMGP_MLN_164_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - follicular_b_cells_cell_count

---

## ALTERNATIVE - Germinal centre B cells - cell count ALTMGP_MLN_165_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - germinal_centre_b_cells_cell_count

---

## ALTERNATIVE - Early germinal centre B cells - cell count

ALTMGP_MLN_166_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - early_germinal_centre_b_cells_cell_count

---

## ALTERNATIVE - Late germinal centre B cells - cell count ALTMGP_MLN_167_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - late_germinal_centre_b_cells_cell_count

---

## ALTERNATIVE - Plasma cells - cell count ALTMGP_MLN_168_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - plasma_cells_cell_count

---

## ALTERNATIVE - Memory B cells - cell count ALTMGP_MLN_169_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - memory_b_cells_cell_count

---

## ALTERNATIVE - B2 marginal zone + precursor cells - cell count ALTMGP_MLN_170_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - b2_marginal_zone_precursor_cells_cell_count

---

## ALTERNATIVE - B2 t1 + t2 cells - cell count ALTMGP_MLN_171_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - b2_t1_t2_cells_cell_count

---

## ALTERNATIVE - B2 t3 + f1+ f2 + gc cells - cell count ALTMGP_MLN_172_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - b2_t3_f1_f2_gc_cells_cell_count

---

## ALTERNATIVE - Total myeloid cells - cell count ALTMGP_MLN_173_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_myeloid_cells_cell_count

---

## ALTERNATIVE - Macrophages - cell count ALTMGP_MLN_174_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - macrophages_cell_count

---

## ALTERNATIVE - Granulocytes + monocytes - cell count ALTMGP_MLN_175_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - granulocytes_monocytes_cell_count

---

## ALTERNATIVE - Granulocytes - cell count ALTMGP_MLN_176_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - granulocytes_cell_count

---

## ALTERNATIVE - Monocytes - cell count ALTMGP_MLN_177_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - monocytes_cell_count

---

## ALTERNATIVE - Eosinophils - cell count ALTMGP_MLN_178_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - eosinophils_cell_count

---

## ALTERNATIVE - Total DC - cell count ALTMGP_MLN_179_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - total_dc_cell_count

---

## ALTERNATIVE - Plasmacytoid DC - cell count ALTMGP_MLN_180_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - plasmacytoid_dc_cell_count

---

## ALTERNATIVE - Conventional DC (cDC) - cell count ALTMGP_MLN_181_001 | v1.1

simpleParameter

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

**Description:** ALTERNATIVE - conventional_dc_cell_count

---

## ALTERNATIVE - CD11b-high cDC - cell count ALTMGP_MLN_182_001 | v1.1

simpleParameter

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

**Description:** ALTERNATIVE - conventional_cd11b_type_dc_cell_count

---

## ALTERNATIVE - CD11b-low cDC - cell count ALTMGP_MLN_183_001 | v1.1

simpleParameter

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

**Description:** ALTERNATIVE - conventional_cd8a_type_dc_cell_count

---

## ALTERNATIVE - CD103+ CD11b-low cDC - cell count ALTMGP_MLN_184_001 | v1.1

simpleParameter

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

**Description:** ALTERNATIVE - cd103_cd8a_type_dc_cell_count

---

## ALTERNATIVE - T cell panel singlets cell count ALTMGP_MLN_185_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - t_cell_panel_singlets_cell_count

---

## ALTERNATIVE - B cell panel singlets cell count ALTMGP_MLN_186_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - b_cell_panel_singlets_cell_count

---

## ALTERNATIVE - Myeloid panel singlets cell count ALTMGP_MLN_187_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - myeloid_panel_singlets_cell_count

---

## ALTERNATIVE - T cell panel live cell count ALTMGP_MLN_188_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - t_cell_panel_live_cell_count

---

## ALTERNATIVE - B cell panel live cell count ALTMGP_MLN_189_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - b_cell_panel_live_cell_count

---

## ALTERNATIVE - Myeloid panel live cell count ALTMGP_MLN_190_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - myeloid_panel_live_cell_count

---

## ALTERNATIVE - T cell panel lymphocyte gate cell count ALTMGP_MLN_191_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - t_cell_panel_lymphocyte_gate_cell_count

---

## ALTERNATIVE - B cell panel lymphocyte gate cell count A

LTMGP_MLN_192_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - b_cell_panel_lymphocyte_gate_cell_count

---

## ALTERNATIVE - Myeloid panel lymphocyte gate cell count

ALTMGP_MLN_193_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - myeloid_panel_lymphocyte_gate_cell_count

---

## ALTERNATIVE - 3i T cell panel ALTMGP_MLN_194_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - 3i_t_cell_panel

**Options:**
(A) CD45 NC605, TCRb AF700, TCRd PE-Cy7, CD8a BV510, CD4 BV786, CD161 BV650, CD44 FITC, CD62L PerCP-Cy5.5, CD25 APC, KLRG1 BV421, GITR PE,
(B) CD45 NC605, TCRb AF700, TCRd PE-Cy7, CD8a BV510, CD4 BV786, CD161 BV650, CD44 FITC, CD62L PerCP-Cy5.5, CD25 APC, KLRG1 BV421, GITR PE, Live/dead near IR,

(C) CD45 Qdot605, CD5 BV510, TCRd PE-Cy7, CD8a AF700, CD4 BV786, CD161 BV650, CD44 FITC, CD62L PerCP-Cy5.5, CD25 APC, KLRG1 BV421, GITR PE, Live/dead near IR,
(D) failed,

---

## ALTERNATIVE - 3i B cell panel ALTMGP_MLN_195_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - 3i_b_cell_panel

**Options:**
(A) CD45 NC605, B220 AF700, CD19 BV786, CD5 BV510, CD21/35 FITC, CD23 BV421, GL-7 PE, IgM PE-Cy7, CD93 PerCP-Cy5.5, CD138 BV650, Live/dead near IR,
(B) CD45 NC605, B220 AF700, CD19 BV786, CD5 BV510, CD21/35 FITC, CD23 BV421, GL-7 AF647, IgM PE-Cy7, IgD PerCP-Cy5.5, CD93 PE, CD138 BV650, Live/dead near IR,
(C) CD45 Qdot605, B220 AF700, CD5 BV510, CD21/35 FITC, CD23 BV421, GL-7 AF647, IgM BV786, IgD PerCP-Cy5.5, IgG1 PE, CD95 PE-Cy7, CD138 BV650, Live/dead near IR,
(D) failed,

---

## ALTERNATIVE - 3i Myeloid panel ALTMGP_MLN_196_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - 3i_myeloid_panel

**Options:**
(A) CD45 NC605, CD11c BV711, CD11b BV510, F4/80 PerCP-Cy5.5, CD103 PE, CD317 APC, CD86 PE-Cy7, MHC II FITC, Gr1 AF700, Dump (CD3, CD19, CD161) BV421, Live /dead near IR,

(B) CD45 Qdot605, CD11c BV786, CD11b BV510, F4/80 PerCP-Cy5.5, CD103 PE, CD317 BV650, CD86 PE-Cy7, MHC II FITC, Ly6C AF700, Ly6G APC, Dump (CD3, CD19, CD161) BV421, Live/dead near IR,
(C) failed,

---

## ALTERNATIVE - Tissue dissociation method ALTMGP_MLN_197_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - tissue_dissociation_method

**Options:** Centrifugation, GentleMACS, Pestle,

---

## ALTERNATIVE - Collagenase digestion ALTMGP_MLN_198_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - collagenase_digestion

**Options:** No, Yes,

---

## ALTERNATIVE - Buffers and enzymes ALTMGP_MLN_199_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - buffers_and_enzymes

**Options:** IMPC, pre-IMPC,

---

## ALTERNATIVE - FACS sample status ALTMGP_MLN_200_001 | v1.0

procedureMetadata

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

**Description:** ALTERNATIVE - facs_sample_status

**Options:** Analysed next day unfixed, Fixed, Fresh, Prepared next day, analysed fresh,

---

## ALTERNATIVE - FACS equipment name ALTMGP_MLN_201_001 | v1.0

procedureMetadata

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

**Description:** ALTERNATIVE - facs_equipment_name

**Options:** Flow cytometer,

## ALTERNATIVE - FACS equipment manufacturer ALTMGP_MLN_202_001 | v1.0

procedureMetadata

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

**Description:** ALTERNATIVE - facs_equipment_manufacturer

**Options:** Beckman Coulter, Beckton Dickinson,

---

## ALTERNATIVE - FACS equipment model ALTMGP_MLN_203_001 | v1.0

procedureMetadata

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

**Description:** ALTERNATIVE - facs_equipment_model

**Options:** FC500, LSR Fortessa X20, LSR II,

---

## ALTERNATIVE - Comments ALTMGP_MLN_204_001 | v1.0

simpleParameter

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

**Description:** ALTERNATIVE - comments

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## ALTERNATIVE - Anesthesia used for blood collection ALTMGP_MLN_205_001 | v1.0

procedureMetadata

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

**Description:** ALTERNATIVE - null

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

---

## ALTERNATIVE - Images associated with FACS analysis ALTMGP_MLN_206_001 | v1.0

seriesMediaParameter

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

**Description:** ALTERNATIVE - Optional series media parameter

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