Maxpar® Human Regulatory T Cell Phenotyping Panel Kit

Catalog#: 201319
Package Size: 25 tests

Storage:
- Antibodies, Buffers, and Water: 4°C. Do not freeze.
- Intercalator-Ir: -20°C.

Contents:

- Maxpar® Cell Staining Buffer (500 mL)
- Maxpar® Nuclear Antigen Staining Buffer Concentrate 4X (8 mL)
- Maxpar® Nuclear Antigen Staining Buffer Diluent (30 mL)
- Maxpar® Nuclear Antigen Staining Perm 1X (100 mL)
- Maxpar® Fix and Perm Buffer (25 mL)
- Maxpar® Water (500 mL)
- Cell-ID™ Ir Intercalator (125 µM; 25 µL)
- Maxpar® Antibodies (see table for panel)**

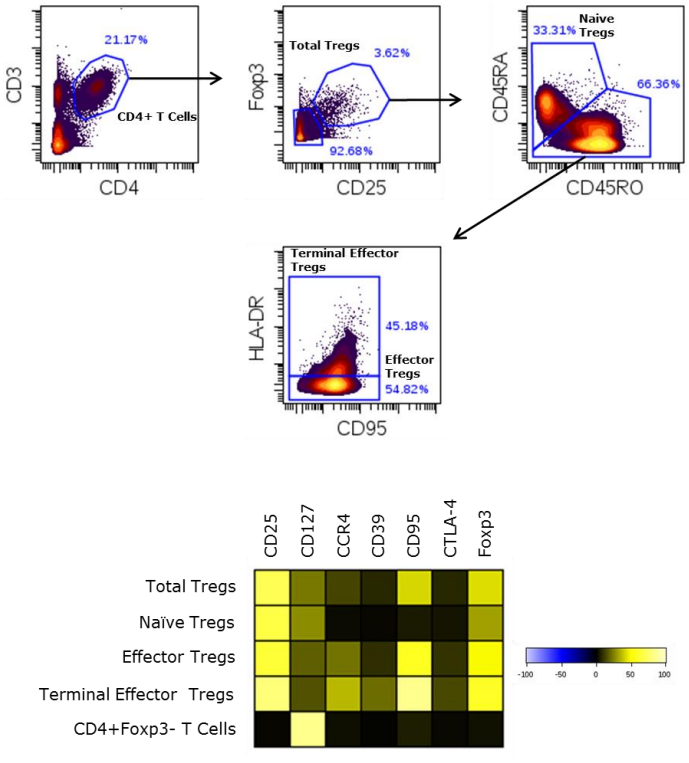
** The antibodies are provided in individual tubes, not a premixed cocktail.

Target	Clone	Metal
CD49D	9F10	141Pr
CD4	RPA-T4	145Nd
CCR4	205410	149Sm
CD45RA	HI100	153Eu
CD3	UCHT1	154Sm
CD39	A1	160Gd
Foxp3	PCH101	162Dy
CD95	DX2	164Dy
CD45RO	UCHL1	165Ho
CD25	2A3	169Tm
CD152	14D3	170Er
HLA-DR	L243	174Yb
CD127	A019D5	176Yb

Technical Information

Description: Regulatory T cells (Tregs) are a suppressive subset of $CD4^+$ T helper (Th) cells important for the regulation of immune responses. Tregs are defined by expression of the transcription factor Foxp3. Additional Treg markers include constitutive expression of the high-affinity IL-2Rα chain (CD25) and cytotoxic T lymphocyte-associated antigen 4 (CTLA-4), along with low expression of the IL-7Rα chain (CD127). $CD4^+CD25^+Foxp3^+$ Tregs can be divided into two main types: thymically derived Tregs (tTregs) and peripherally derived Tregs (pTregs). Although it is difficult to distinguish between tTregs and pTregs phenotypically, both are thought to have an essential role in immune regulation. Because of their immunoregulatory function, Tregs are an attractive therapeutic target in many different immune-mediated diseases, including transplantation, autoimmunity, and autoinflammation.

Recommended Usage: For staining with the Human Regulatory T Cell Phenotyping Panel Kit, cells should be prepared using standard techniques and stained according to the Maxpar® Nuclear Antigen Staining Protocol.



Human PBMCs were stained with the Human Regulatory T Cell Phenotyping Panel Kit. Total, naïve, effector, and terminal effector populations of CD4+ regulatory T cells were identified as indicated, in addition to CD4+Foxp3- non-regulatory T cells. The median expression of markers in each population is indicated in the heatmap.

References:

The environment of regulatory T cell biology: cytokines, metabolites, and the microbiome. Hoeppli RE, Wu D, Cook L, Levings MK. Front Immunol. 2015 Feb 18;6:61. 2015. Review.

FOXP3+ regulatory T cells in the human immune system. Sakaguchi S, Miyara M, Costantino CM, Hafler DA. Nat Rev Immunol. 2010 Jul;10(7):490-500. Review.