Maxpar Anti-Human CD274/PD-L1 (MIH1)-169Tm

Catalog Number, Package Size: 3169029B, 100 tests
3169029C, 25 tests
Clone: MIH1
Other Names: B7-H1, programmed death ligand 1
Isotype: Mouse IgG1, kappa

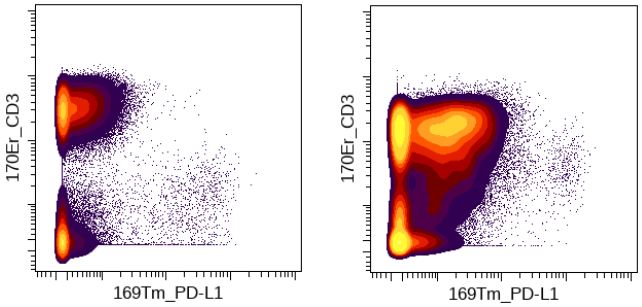
Reactivity: Human, Dog, Mouse
Tag: 169Tm
Formulation: Antibody stabilizer with 0.05% sodium azide
Storage: Store at 2–8 °C. Do not freeze.
Application: Suspension mass cytometry

Technical Information

Description: PD-L1 (also known as CD274, B7-H1), one of the ligands for programmed death 1 (PD-1), is an immune-inhibitory receptor belonging to the CD28/cytotoxic T lymphocyte antigen 4 (CTLA-4) family. It can deliver an inhibitory signal to PD-1/B7-1-expressing T cells, resulting in immune-suppressive effects. PD-L1 is expressed on activated T cells, B cells, NK cells, DCs, macrophages, and bone marrow-derived mast cells. PD-L1 expression is also found on a wide range of human tumors such as kidney, ovarian, bladder, breast, liver, gastric, pancreatic and non-small cell lung cancer (NSCLC). Most important, these studies reveal that higher expression of PD-L1 may facilitate advancement of tumor stage and increase the invasion potential. PD-L1 expression can be induced by many inflammatory mediators and cytokines, of which interferon-γ (IFN-γ) is the most potent. Blockade of the PD-1/PD-L1 interaction has been shown to reverse immune exhaustion and is a critical target of current immunotherapeutics.

Application: The metal-tagged antibody is designed and formulated for the application of suspension mass cytometry using the Fluidigm CyTOF® suspension systems on healthy human PBMC.

Validation: Each lot of Maxpar® antibody is quality control-tested by suspension mass cytometry analysis of stained cells using appropriate positive and negative cell staining and/or activation controls.



Three-day rested (left) or PHA-stimulated human PBMC were stained with anti-CD3 (UCHT1)-170Er and anti-PD-L1 (MIH1)-169Tm antibodies. Cells shown are gated on total live CD45+ singlet cells.

Recommended use: Use 1 µL for up to 3 x 10^6 live cells in 100 µL staining volume. We recommend titrating the antibody for optimal performance for each of the desired applications. Centrifuge the stock antibody at 12,000 × *g* for 5 min to sediment antibody aggregates.

Fixation is typically used in intracellular staining protocols or in barcoding with the Cell-ID™ 20-Plex Pd Barcoding Kit. However, fixing before antibody staining can affect epitope structure and antibody binding, with the impact varying on the type and concentration of fixative and the protocol used. It is therefore important to perform a small, preliminary antibody staining experiment, with and without fixation, using non-critical samples.

Applicable Protocols

Before using this product, refer to the instructions in the Maxpar Cell Surface Staining with Fresh Fix Protocol (400276).

References

Bandura, D.R. et al. "Mass cytometry: technique for real time single cell multitarget immunoassay based on inductively coupled plasma time-of-flight mass spectrometry." Analytical Chemistry 81 (2009): 6,813–22.

Ornatsky, O.I. et al. "Highly multiparametric analysis by mass cytometry." Journal of Immunological Methods 361 (2010): 1–20.

Boddupalli, C.S. et al. "Interlesional diversity of T cell receptors in melanoma with immune checkpoints enriched in tissue-resident memory T cells." JCI Insight 1 (2016): e88955.

Safety

Use standard laboratory safety protocols. Read and understand the safety data sheets (SDSs) before handling chemicals. To obtain SDSs, go to fluidigm.com and search for **3000000X**.