Maxpar Anti-Human TIGIT (MBSA43)-209Bi

Catalog Number, Package Size: 3209013B, 100 tests
3209013C, 25 tests
Clone: MBSA43
Other Names: VSTM3, WUCAM
Isotype: Mouse IgG1, kappa

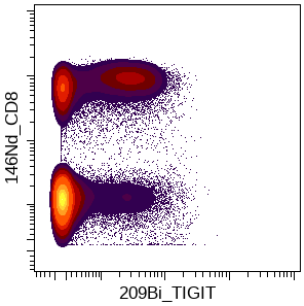
Reactivity: Human
Tag: 209Bi
Formulation: Antibody stabilizer with 0.05% sodium azide
Storage: Store at 2–8 °C. Do not freeze.
Application: Suspension mass cytometry

Technical Information

Description: T cell Ig and ITIM domain (TIGIT) is a transmembrane glycoprotein belonging to a poliovirus receptor family of type I proteins that binds to its ligands CD155 and CD112. TIGIT is expressed on peripheral memory and regulatory (Treg) CD4+ T cells as well as NK cells and is up-regulated following activation on naive CD4+ T cells. CD155 is a high-affinity receptor for TIGIT expressed on monocytes and CD11c+ human dendritic cells (DCs). TIGIT contains an Ig-like V-type domain and an ITIM in its cytoplasmic domain, suggesting that receptor occupancy may trigger a negative signaling event. Engagement of TIGIT by CD155 on human DCs enhances the production of IL-10 while diminishing the production of IL-12p40, and a T cell-intrinsic inhibitory effect of TIGIT-dependent T cell signaling pathway was demonstrated in murine models of experimental autoimmune encephalomyelitis (EAE).

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.



Human PBMC stained with anti-CD8 (RPA-T8)-146Nd and anti-TIGIT (MBSA43)-209Bi. Cells shown are gated on total T cells (CD45+CD20-CD14-CD3+).

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.

Bengsch, B. et al. "Epigenomic-guided mass cytometry profiling reveals disease-specific features of exhausted CD8 T cells." Immunity 48 (2018): 1,029–45.

Gadalla, R. et al. "Validation of CyTOF against flow cytometry for immunological studies and monitoring of human cancer clinical trials." Frontiers in Oncology 9 (2019): 415.

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**.