Maxpar Anti-CD278/ICOS (C398.4A)-175Lu

Catalog Number, Package Size: 3175039B, 100 tests
3175039C, 25 tests
Clone: C398.4A
Other Names: Inducible co-stimulatory molecule, H4
Isotype: Armenian Hamster IgG

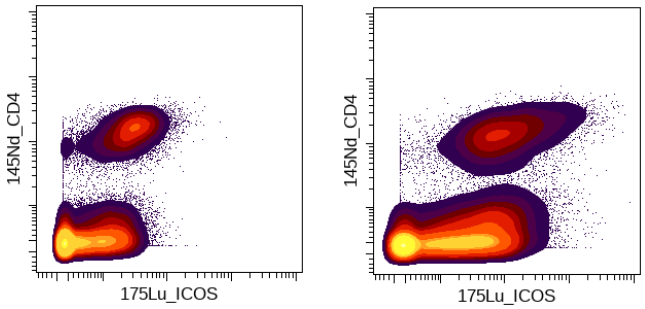
Reactivity: Human, Rhesus, Rat, Mouse, Porcine
Tag: 175Lu
Formulation: Antibody stabilizer with 0.05% sodium azide
Storage: Store at 2–8 °C. Do not freeze.
Application: Suspension mass cytometry

Technical Information

Description: CD278, also known as ICOS, is a 50–60 kDa homodimeric membrane glycoprotein and a member of the CD28 family reacting with the inducible co-stimulatory ligand (ICOSL) molecule. It is highly expressed on activated T cells. It is the receptor for B7-related protein 1 (B7RP-1). Like CD28, ICOS is a co-stimulatory signal for T cell activation and proliferation and cytokine production. It is not expressed on resting or activated B cells, monocytes, NK cells, granulocytes, dendritic cells, or platelets. Unlike the constitutively expressed CD28, ICOS expression is de novo. It has been suggested that ICOS may play an important role in IL-10 production. In the presence of IL-10, purified recombinant human ICOS significantly increased in vitro B cell growth stimulated by pokeweed mitogen (PWM) and enhanced production of IgG.

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-CD4 (RPA-T4)-145Nd and anti-ICOS (C398.4A)-175Lu antibodies. 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.

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**.