Anti-Human CD152 (CTLA-4) Purified

Catalog Number: 14-1529
RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Anti-Human CD152 (CTLA-4) Purified
REF **Catalog Number:** 14-1529
Clone: 14D3
Concentration: 0.5 mg/mL
Host/Isotype: Mouse IgG2a, kappa
HLDA Workshop: N/A

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial
Contains sodium azide

Description

The 14D3 monoclonal antibody reacts with human CD152, also known as cytotoxic T lymphocyte antigen-4 (CTLA-4). CTLA-4, a protein with structural similarities to CD28, is expressed on activated T cells (activated B cells may also express CTLA-4) and binds the B7 family members, CD80 (B7-1) and CD86 (B7-2), with higher affinity than CD28 does. CTLA-4 and CD28 appear to deliver opposing signals to T cells: while CD28 is a potent costimulator, CTLA-4 restricts the progression of T cells to an activated state by inhibiting IL-2 secretion and cellular proliferation. The cytoplasmic portion of CTLA-4 contains ER retention motifs, resulting in intracellular localization of a large proportion of newly synthesized CTLA-4 in response to TCR signaling.

The 14D3 antibody also recognizes rhesus monkey and has inhibitor activity.

Applications Reported

The 14D3 antibody has been reported for use in flow cytometric analysis, immunoblotting (WB), and immunohistochemical staining of frozen tissue sections. 14D3 has also been reported in *in vitro* inhibition studies. (Please use Functional Grade purified 14D3 in functional assays.)

Applications Tested

The 14D3 antibody has been tested by flow cytometric analysis of PHA stimulated human PBMCs. This can be used at less than or equal to 0.25 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Furthermore, due to the intracellular localization of a large portion of CTLA-4, for complete detection it may be necessary to assess intracellular expression, in addition to surface expression of CTLA-4.

References

Simone R, Zicca A, Saverino D.The frequency of regulatory CD3+CD8+CD28- CD25+ T lymphocytes in human peripheral blood increases with age. J Leukoc Biol. 2008 Dec;84(6):1454-61. (14D3, FC)

Saverino D, Brizzolara R, Simone R, Chiappori A, Milintenda-Floriani F, Pesce G, Bagnasco M. Soluble CTLA-4 in autoimmune thyroid diseases: relationship with clinical status and possible role in the immune response dysregulation. Clin Immunol. 2007 May;123(2):190-8. (14D3, WB, PubMed)

Vandenborre K, Van Gool SW, Kasran A, Ceuppens JL, Boogaerts MA, Vandenberghe P. Interaction of CTLA-4 (CD152) with CD80 or CD86 inhibits human T-cell activation. Immunology.1999 Nov;98(3):413-21. (14D3, FA)

Vandenborre K, Delabie J, Boogaerts MA, De Vos R, Lorré K, De Wolf-Peeters C, Vandenberghe P. Human CTLA-4 is expressed in situ on T lymphocytes in germinal centers, in cutaneous graft-versus-host disease, and in Hodgkin's disease. Am J Pathol. 1998 Apr;152(4):963-73.

Related Products

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12-4317 Streptavidin PE
13-4013 Anti-Mouse IgG Biotin (Polyclonal)
14-4724 Mouse IgG2a K Isotype Control Purified
17-4317 Streptavidin APC

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