

# CD152 (CTLA-4) Monoclonal Antibody (14D3), Functional Grade, eBioscience

Product Details	
Size	100 µg
Species Reactivity	Human, Rhesus monkey
Published Species	Human
Host/Isotype	Mouse / IgG2a, kappa
Recommended Isotype Control	Mouse IgG2a kappa Isotype Control (eBM2a), Functional Grade, eBioscience
Class	Monoclonal
Type	Antibody
Clone	14D3
Conjugate	Functional Grade
Form	Liquid
Concentration	1 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	no preservative
Storage Conditions	4° C
RRID	AB_469080

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.25 µg/test	4 Publications
Neutralization (Neu)	Assay-Dependent	-
Functional Assay (FN)	Assay-Dependent	1 Publication
Miscellaneous PubMed (Misc)	-	1 Publication

## Product Specific Information

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. It 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 normal human peripheral

blood cells. 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<sup>5</sup> to 10<sup>8</sup> 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.

Storage and handling: Use in a sterile environment.

Filtration: 0.2 µm post-manufacturing filtered.

Purity: Greater than 90%, as determined by SDS-PAGE.

Endotoxin Level: Less than 0.001 ng/µg antibody, as determined by LAL assay.

Aggregation: Less than 10%, as determined by HPLC.

## 6 References

### Flow Cytometry (4)

#### Oncotarget

#### HDAC inhibition potentiates immunotherapy in triple negative breast cancer.

"Published figure using CD152 (CTLA-4) monoclonal antibody (Product # 16-1529-82) in Flow Cytometry"

Authors: Terranova-Barberio M, Thomas S, Ali N, Pawlowska N, Park J, Krings G, Rosenblum MD, Budillon A, Munster PN

**Species**  
Human  
Not Applicable

**Dilution**  
Not Cited  
Not Cited

**Year**  
2017

#### Journal of virology

#### Efficient Nef-mediated downmodulation of TCR-CD3 and CD28 is associated with high CD4+ T cell counts in viremic HIV-2 infection.

"16-1529 was used in Flow cytometry/Cell sorting to elucidate the role of the Nef protein in enhancing functionality of immune cells and in the immunopathogenesis of HIV-2 infection."

Authors: Khalid M, Yu H, Sauter D, Usmani SM, Schmokel J, Feldman J, Gruters RA, van der Ende ME, Geyer M, Rowland-Jones S, Osterhaus AD, Kirchhoff F

**Species**  
Human

**Dilution**  
Not Cited

**Year**  
2012

[View more Flow references on thermofisher.com](#)

### Functional Assay (1)

#### Oncotarget

#### CTLA-4 positive breast cancer cells suppress dendritic cells maturation and function.

"16-1529 was used in Western Blotting to highlight the clinical application of CTLA-4 blockade therapy in breast cancer."

Authors: Chen X, Shao Q, Hao S, Zhao Z, Wang Y, Guo X, He Y, Gao W, Mao H

**Species**  
Human

**Dilution**  
Not Cited

**Year**  
2017

### Miscellaneous PubMed (1)

#### Journal of immunology (Baltimore, Md. : 1950)

#### Human prostate tumor antigen-specific CD8+ regulatory T cells are inhibited by CTLA-4 or IL-35 blockade.

"16-1529 was used in Magnetic cell separation to test the hypothesis that in addition to natural CD4(+)CD25(+) regulatory T cells (Tregs) and myeloid-derived suppressor cells, tumor Ag-specific Tregs interfere with the detection of anti-tumor immunity after immunotherapy."

Authors: Olson BM, Jankowska-Gan E, Becker JT, Vignali DA, Burlingham WJ, McNeel DG

**Species**  
Human

**Dilution**  
Not Cited

**Year**  
2012

### More applications with references on thermofisher.com

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.