

PerCP/Fire™ 780 anti-human CD152 (CTLA-4) Antibody

Catalog# / Size	369651 / 25 tests 369652 / 100 tests
Clone	BNI3
Regulatory Status	RUO
Other Names	CTLA4, Cytotoxic T-Lymphocyte Antigen 4, CTLA-4
Isotype	Mouse IgG2a, κ
Description	CD152, also known as Cytotoxic T-Lymphocyte Antigen 4 (CTLA-4), is a 33 kD member of the immunoglobulin superfamily. It is transiently expressed on activated T cells. CTLA-4 is expressed on the surface of helper T cells and transmits an inhibitory signal to T cells. Regulatory T cells express high levels of CTLA-4. CTLA-4 (CD152) is similar to CD28 in amino acid sequence, structure, and genomic organization. Whereas CD28 delivers a costimulatory signal in T cell activation, CTLA-4 negatively regulates cell-mediated immune responses through interaction with CD80 (B7-1) and CD86 (B7-2) present on antigen presenting cells (APC). CTLA-4 is thought to play a role in the induction and maintenance of immunological tolerance as well as the development of protective immunity and thymocyte regulation.

Mutations in the CTLA-4 gene have been associated with various autoimmune diseases, such as systemic lupus erythematosus, insulin-dependent diabetes mellitus, and other autoimmune diseases. A transcript of the CTLA-4 gene that may represent a native soluble form of CTLA-4 (sCTLA-4) showed that eleven of twenty patients with autoimmune thyroid disease (ATD) had a high concentration of sCTLA-4, whereas only 1 of 30 apparently healthy volunteers contained measurable levels. sCTLA-4 immunoreactivity was inhibited by its binding to B7.1, suggesting that sCTLA-4 is a functional receptor. sCTLA-4 also plays a role in the initial immune response to infection of immune cells by HIV, along with the CD-1 pathway and others.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Extracellular domain of human CTLA-4 and constant regions of the human IgG heavy chain (CTLA-4/IgG)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PerCP/Fire™ 780 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* PerCP/Fire™ 780 has a maximum excitation of 478 nm and a maximum emission of 780 nm.

Excitation Laser	Blue Laser (488 nm)
Application Notes	<i>Based on in-house testing, we do not recommend using clone BNI3 for immunohistochemistry of paraffin-embedded tissue section.</i>
Application References	1. Linsley PS, <i>et al.</i> 1992. <i>J. Exp. Med.</i> 176:1595.
(PubMed link indicates BioLegend citation)	2. Bonzheim I, <i>et al.</i> 2008. <i>Am. J. Clin. Pathol.</i> 130:613.

Antigen Details

Structure	Ig superfamily and 33 kD.
Distribution	Activated T cells and B cells.
Function	Negative regulator of T cell activation.
Interaction	Antigen presenting cells, such as dendritic cells.
Ligand/Receptor	B7-1 (CD80), B7-2 (CD86).
Cell Type	B cells, T cells
Biology Area	Immunology, Inhibitory Molecules
Molecular Family	CD Molecules, Immune Checkpoint Receptors
Antigen References	1. Kuiper HM, <i>et al.</i> 1995. <i>J. Immunol.</i> 155:1776. 2. Castan J, <i>et al.</i> 1997. <i>Immunology</i> 90:265. 3. Lee CC, <i>et al.</i> 2009. <i>Pediatr. Allergy Immunol.</i> 20:624. 4. Pistillo MP, <i>et al.</i> 2003. <i>Blood</i> 101:202. 5. Tan PH, <i>et al.</i> 2005. <i>Blood.</i> 106:2936. 6. Steiner K, <i>et al.</i> 2001. <i>Clin. Exp. Immunol.</i> 126:143.
Gene ID	1493

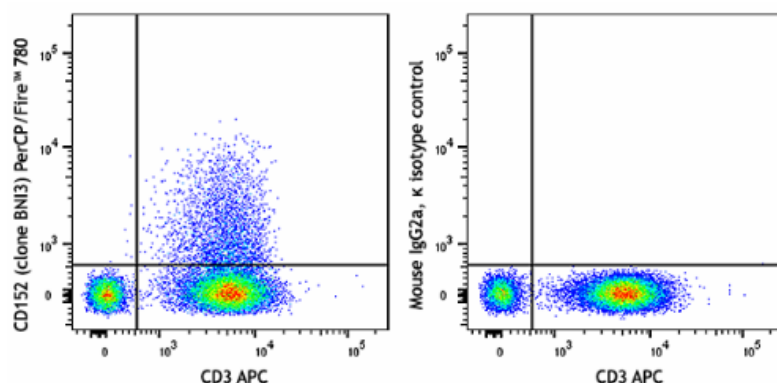
Related Protocols

- [Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

APC/Cyanine7 anti-human CD152 (CTLA-4) Antibody, Brilliant Violet™ 711 anti-human CD152 (CTLA-4), TotalSeq™-D0151 anti-human CD152 (CTLA-4), PE/Fire™ 640 anti-human CD152 (CTLA-4), Spark Red™ 718 anti-human CD152 (CTLA-4), PE/Cyanine5 anti-human CD152 (CTLA-4), PE/Fire™ 744 anti-human CD152 (CTLA-4), PE/Fire™ 810 anti-human CD152 (CTLA-4), Brilliant Violet 510™ anti-human CD152 (CTLA-4), Brilliant Violet 421™ anti-human CD152 (CTLA-4), PerCP/Cyanine5.5 anti-human CD152 (CTLA-4), PE/Cyanine7 anti-human CD152 (CTLA-4), PE/Dazzle™ 594 anti-human CD152 (CTLA-4), Purified anti-human CD152 (CTLA-4), PE anti-human CD152 (CTLA-4), APC anti-human CD152 (CTLA-4), Spark Blue™ 574 anti-human CD152 (CTLA-4) (Flexi-Fluor™), TotalSeq™-A0151 anti-human CD152 (CTLA-4), Biotin anti-human CD152 (CTLA-4), Brilliant Violet 605™ anti-human CD152 (CTLA-4), TotalSeq™-B0151 anti-human CD152 (CTLA-4), TotalSeq™-C0151 anti-human CD152 (CTLA-4), Brilliant Violet 785™ anti-human CD152 (CTLA-4), APC/Fire™ 750 anti-human CD152 (CTLA-4), Alexa Fluor® 647 anti-human CD152 (CTLA-4), Brilliant Violet 650™ anti-human CD152 (CTLA-4), Spark Blue™ 550 anti-human CD152 (CTLA-4) (Flexi-Fluor™), PerCP/Fire™ 780 anti-human CD152 (CTLA-4)

Product Data



Human peripheral blood mononuclear cells were stimulated with Cell Activation Cocktail (without Brefeldin) for 4 hours and surface stained with anti-human CD3 (clone UCHT1) APC. Cells were then fixed, permeabilized, and intracellularly stained with anti-human CD152 (CTLA-4) (clone BNI3) PerCP/Fire™ 780 (left), or mouse IgG2a, κ PerCP/Fire™ 780 isotype control (right).

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