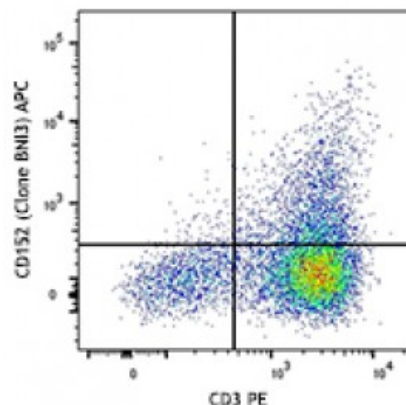


**APC anti-human CD152 (CTLA-4)**

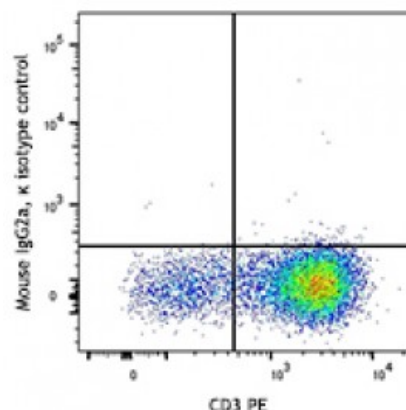
<b>Catalog # / Size:</b>	2448055 / 25 tests 2448060 / 100 tests
<b>Clone:</b>	BNI3
<b>Isotype:</b>	Mouse IgG2a, $\kappa$
<b>Immunogen:</b>	Extracellular domain of human CTLA-4 and constant regions of the human IgG heavy chain (CTLA-4/IgG)
<b>Reactivity:</b>	Human
<b>Preparation:</b>	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions. The solution is free of unconjugated APC and unconjugated antibody.
<b>Formulation:</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).
<b>Concentration:</b>	0.2



PHA-stimulated human peripheral blood mononuclear cells (3 days) were stained with CD3 PE and anti-human CD152 (clone BNI3) APC (top), or mouse IgG2a,  $\kappa$  APC isotype control (bottom).

**Applications:**

<b>Applications:</b>	Flow Cytometry
<b>Recommended Usage:</b>	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.



<b>Application References:</b>	1. Linsley PS, <i>et al.</i> 1992. <i>J. Exp. Med.</i> 176:1595. 2. Bonzheim I, <i>et al.</i> 2008. <i>Am. J. Clin. Pathol.</i> 130:613.
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**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.

**Antigen  
References:**

1. Kuiper HM, *et al.* 1995. *J. Immunol.* 155:1776.
2. Castan J, *et al.* 1997. *Immunology* 90:265.
3. Lee CC, *et al.* 2009. *Pediatr. Allergy Immunol.* 20:624.
4. Pistillo MP, *et al.*