

TECHNICAL DATA SHEET

In Vivo Ready™ Anti-Human CD152 (CTLA-4) (BNI3)

Catalog Number: 40-1529

PRODUCT INFORMATION

Contents: In Vivo Ready™ Anti-Human CD152

Isotype: Mouse IgG2a, kappa

Concentration: 2.0 mg/mL

Clone: BNI3

Reactivity: Human

Use By: 12 months from date of receipt

Storage Conditions: 2-8°C

Endotoxin Level: Less than or equal to 0.01 EU/ug, as determined by the LaL assay

Formulation: 10 mM NaH₂PO₄, 150 mM NaCl, pH7.2

DESCRIPTION

The BNI3 antibody is specific for human CD152, commonly known as CTLA-4, a 33-37 kDa protein expressed as a homodimer on the surface of activated T and B cells, and on thymocytes. CTLA-4 is structurally similar, yet functionally disparate, to the T cell co-stimulatory molecule CD28. Both CTLA-4 and CD28 interact with the co-stimulatory molecules CD80 (B7-1) and CD86 (B7-2) on antigen-presenting cells, with CTLA-4 displaying a higher avidity than CD28. While CD28 typically delivers a potent co-stimulatory signal in support of T cell activation, CTLA-4 appears to act as a negative regulator of T cell activation and may contribute to the suppressor function of Treg cells. CTLA-4 proteins may be initially sequestered within Golgi vesicles, from which they can be transferred to and from the cell surface, a mechanism by which Treg cells can selectively impart suppressive functions. The BNI3 antibody may be used for flow cytometric analysis of intracellular or surface CTLA-4 expression, and is also widely used for neutralization of CTLA-4 when expressed at the cell surface. The BNI3 antibody is reported to be cross-reactive with Baboon, Cynomolgus and Rhesus CTLA-4.

PREPARATION & STORAGE

This monoclonal antibody preparation was purified from tissue culture supernatant via affinity chromatography. For In Vivo Ready™ (IVR) products, each preparation is also evaluated for endotoxin levels using the LAL assay. It is recommended to store the product undiluted at 4°C. Do not freeze.

APPLICATION NOTES

This antibody preparation has been quality-tested for flow cytometry using an appropriate cell type. The amount of antibody required for optimal staining of a cell sample should be determined empirically in your system. Tonbo Biosciences tests all of our antibodies by flow cytometry. Citations may be provided as a resource for additional applications that have not been validated by Tonbo Biosciences.

REFERENCES

Moreno-Fernandez ME, Rueda CM, Rusie LK, and Chougnet CA. 2011. *Blood*. 117: 5372-5380. (in vitro blocking) Schonfeld D, Matschiner G, Chatwell L, Trentmann S, Gille H, Hulsmeyer M, Brown N, Kaye PM, Schlehuber S, Hohlbaum AM and Skerra A. 2009. 106: 8198-8203. (Immunohistochemistry – frozen tissue) Rivas MN, Weatherly K, Hazzan M, Vokaer B, Dremier S, Gaudray F, Goldman M, Salmon I, and Braun MY. 2009. 183:4284-4291. (in vitro blocking) Bonzheim I, Geissinger E, Tinguely M, Roth S, Grieb T, Reimer P, Wilhelm M, Rosenwald A, Muller-Hermelink HK, and Rudiger T. 2008. *Am. J. Clin. Pathol.* 130: 613-619. (Immunohistochemistry – paraffin embedded tissue; Immunofluorescence microscopy – frozen tissue) Young NT, Waller ECP, Patel R, Roghanian A, Austyn JM, and Trowsdale J. 2008. 111: 3090-3096. (in vitro activation) Wei B, da Rocha Dias S, Wang H and Rudd CE. 2007. *J. Immunol.* 179: 400-408. (in vitro activation) Jonuleit H, Schmitt E, Stassen M, Tuettenberg A, Knop J and Enk AH. 2001. *J. Exp. Med.* 193: 1285-1294 (in vitro blocking) Oaks MK and Hallett KM. 2000. *J. Immunol.* 164: 5015-5018. (Immunoprecipitation; EIA – plate coating)

Tonbo Biosciences tests all antibodies by flow cytometry. Citations are provided as a resource for additional applications that have not been validated by Tonbo Biosciences. Please choose the appropriate format for each application and consult Materials and Methods sections for additional details about the use of any product in these publications.

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