**SPECIFICITY**

The CD28 antigen, (Tp44), is a homodimeric, disulfide-linked, type 1 transmembrane protein; the monomer is 202 amino acid-long, with a molecular weight of 44 kDa (1, 2). The extracellular region, homologous to an Ig V-like domain, shares significant amino acid sequence with the CD152 antigen (CTLA-4) (3).

The CD28 antigen is involved in the interaction of T lymphocytes with professional antigen-presenting cells (APCs), through its counter-receptors, B7-1/BB-1 (CD80) and B7-2/BB70 (CD86). It provides a major co-stimulatory signal for T cell activation, proliferation and lymphokine production. The CD28 family of receptors (CD28, CTLA-4, ICOS, PD-1 and BTLA) plays a critical role in controlling the adaptive immune response. The CD28 receptor can enhance T cell responses to antigen, as well as controlling the adaptive immune response. ICOS, PD-1, and BTLA signaling can lead to the selective transcription of genes, a TCR antigen receptor (TCR) signals, as well as delivering independent signals. Although the signals through CD28 are crucial for the initial co-stimulation of interleukin-2 (IL-2) production (4), a TCR-independent CD28 signal leads to the selective transcription of survival, but not proliferative genes (5).

The cytoplasmic region of CD28 can associate with the PI3-kinase (2), the GRB-2/SOS complex, and the T cell-specific protein-tyrosine kinase ITK (6, 7). The pYNM motif of the intracellular domain of CD28 binds to the SH2 domains of PI3-kinase and GRB-2.

CD28 is expressed on T cells, on plasma cells and thymocytes (1, 8). The CD28.2 monoclonal antibody has been assigned to the CD28 cluster of differentiation at the 5th International Workshop on Human Leucocyte Differentiation Antigens in Boston, U.S.A., in 1993 (1).

**REAGENT CONTENTS**

This antibody is provided in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin.

**STATEMENTS OF WARNING**

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.

2. Specimens, samples and all material coming in contact with them should be considered potentially infectious and disposed of with proper precautions.

3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.

4. Do not use antibody beyond the expiration date on the label.

5. Do not expose reagents to strong light during storage or incubation.

6. Avoid microbial contamination of reagents or incorrect results might occur.

7. This reagent is stable up to the expiration date when stored at 2–8°C. Do not freeze. No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18–25°C prior to use.

**STORAGE AND HANDLING CONDITIONS AND STABILITY**

This reagent is stable up to the expiration date when stored at 2–8°C. Do not freeze. No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18–25°C prior to use.

**SELECTED RESEARCH REFERENCES**


**TRADEMARKS**

Beckman Coulter logo and IOTest, are trademarks of Beckman Coulter; Beckman Coulter logo, IOTest are registered in the USPTO and SIPO.

**MANUFACTURED BY :** IMMUNOTECH SAS

a Beckman Coulter Company

130, avenue de Lattre de Tassigny

B.P. 177 - 13276 Marseille Cedex 9

France

For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

www.beckmancoulter.com

Printed in France.

Made in France.

©2011 Beckman Coulter, Inc.