

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD86 antigen (B7-2, B70) is a single-chain transmembrane glycoprotein, structurally similar to CD80 (B7-1) (1, 2). Its molecular weight is 80 kDa, under reducing conditions. The extracellular region is composed of one V-type and one C-type Ig-like domains. There are 8 potential sites for N-glycosylation. The cytoplasmic tail has 3 potential sites for protein kinase C phosphorylation (3, 4). CD86 shares with CD80 the same co-receptors on T cells, CD28 and CD152 (CTLA-4). CD86 binds to CD152 with a 20 to 100-fold higher affinity than to CD28 (5). CD86 and CD80 have a critical role in one costimulatory pathway involved in the prevention of antigen-specific T-cell tolerance (anergy), mediated by ligation of CD28 on T cells by its ligands, CD86 and CD80 on antigen-presenting cells (6).

CD86 is constitutively expressed by interdigitating dendritic cells, peripheral blood monocytes, activated B cells, and, at a lower level, by peripheral blood dendritic cells (1, 2). On lymphocytes, CD86 appears as a B-cell activation antigen. It is preferentially expressed by memory B cells and germinal B center cells, but not on plasma cells (3). Its expression can be up-regulated by activation through surface immuno-globulin, MHC-class II molecules, and CD40 triggering, or by PMA treatment with ionomycin. Also, PHA-activated T cells show a weak expression of CD86 on CD4-positive cells, and a consistent one on CD8-positive cells (4).

REAGENT

IOTest CD86-PE Conjugated Antibody
PN IM2729U – 2 mL Liquid – 20 µL / test*.

Clone	HA5.2B7
Isotype	IgG2b κ, mouse
Source	Ascites fluid
Immunogen	B7.2 transfected CHO cells
Purification	Ion exchange or affinity chromatography
Conjugation	R-phycoerythrin (PE) is conjugated at 0.5 – 1.5 moles of PE per mole of Ig.
Fluorescence	PE (orange-red) Excites at 486 – 580 nm Emits at 568 – 590 nm

REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline, with 0.1% sodium azide (NaN₃) as preservative, and 2.0 mg / mL bovine serum albumin (BSA).

STATEMENT OF WARNINGS

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic 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. Do not use antibody beyond the expiration date on the label.
3. Samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
4. Never pipet by mouth and avoid contact of samples with skin and mucous membranes
5. Minimize exposure of reagent to light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. Minimize exposure to light.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this PE-labeled reagent (clear colorless to pinkish liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

REAGENT PREPARATION

No preparation is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

SELECTED RESEARCH REFERENCES

1. Boussiotis, V.A., Freeman, G.J., Gribben, J.G., Daley, J., Gray, G., Nadler, L.M., "Activated human B lymphocytes express three CTLA-4 counterreceptors that costimulate T-cell activation", 1993, Proc. Natl. Acad. Sci. USA, 90, 11059-11063.
2. Engel, P., Gribben, J.G., Freeman, G.J., Zhou, L.J., Nozawa, Y., Abe, M., Nadler, L.M., Wakasa, H., Tedder, T.F., "The B7-2 (B70) costimulatory molecule expressed by monocytes and activated B

- lymphocytes is the CD86 differentiation antigen", 1994, Blood, 5, 84, 1402-1407.
3. Hardie, D., L., Casamayor, M., Johnson, G.D., Hill, D., Van Schijndel, G., Van Lier, R., Khan, M., MacLennan, I. C.M., "CD86 workshop panel report", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 201-204.
 4. Salamone, M.C., Salamone, G.V., Reyes, G.B., Barboza, M., Kado, M., Ramhorst, R., Fainboim, L., "CD86 workshop: preferential staining of activated CD8-positive T lymphocytes by monoclonal antibody CD86.6", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 204-205.
 5. Ellis, J.H., Burden, M.N., Vinogradov, D.V., Linge, C., Crowe, J.S., "Interactions of CD80 and CD86 with CD28 and CTLA4", 1996, J. Immunol., 56, 2700-2709.
 6. Gause, W.C., Halvorson, M.J., Lu, P., Greenwald, R., Linsley, P., Urban, J.F., Finkelman, F.D., "The function of costimulatory molecules and the development of IL-4 producing T cells", 1997, Immunol. Today, 3, 18, 115-120.

PRODUCT AVAILABILITY

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PE is licensed under patent 4,520,110.

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

Outside the USA, contact your local Beckman Coulter representative.

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(*) : 20 µL is the quantity of product sufficient to stain

5 x 10⁵ cells in a standard immunofluorescence assay