**SPECIFICITY**

Interleukin-2 (IL-2) is a monomeric protein with one potential O-linked glycosylation site responsible for size and charge heterogeneity of the mature molecule. All isoforms of the IL-2 molecule resulting in a molecular weight ranging from 15 to 20 kDa show an identical biological activity (1). The high affinity IL-2 receptor (IL2-R) is a trimeric complex composed of three polypeptides chains, α (IL-2Rα, Tac, p55, or CD25), β (IL-2Rβ, p75, or CD122), and γ (IL-2Rγ, or p64). T lymphocytes express an intermediate-affinity IL-2 receptor that comprises γβ or αγ/chain complex. IL2-Rα and IL-2Rγ chains are involved in IL-2-mediated cellular signaling (1, 2).

Described originally as a growth factor for T mediated cellular signaling (1, 2), IL-2 is a lymphokine produced by activated T lymphocytes including CD4 lymphocytes (T Cells Growth Factor: TCGF), and IL-2Rα chain. Activated CD4 lymphocytes (T helper cells) and CD8 lymphocytes (T cytotoxic / suppressor, or Tc cells) (3). Secreted-IL-2 induces IL-2 receptor synthesis and IL-2 production, constituting by this way the major autocrine growth factor for activated T lymphocytes (2). IL-2 stimulates the activation of T lymphocytes and enhances growth and differentiation of immuno-competent cells such as B lymphocytes, monocytes, macrophages and NK cells (1). IL-2 enhances the generation of cytotoxic T lymphocytes (4, 5).

IL-2 is involved in Th1/Th2 (T helper 1 / T helper 2) cytokine pathways regulating Th1 cells as an autocrine growth factor (3, 5 – 7). The cytokines produced by Th1 and Th2 lymphocyte subsets determine a symmetrical pathway of the immune response. Activated CD4 T lymphocytes of the Th1 profile secrete IL-2, IFNγ (interferon γ), and TNFα (Tumor Necrosis Factor α). Th1 profile of cytokine secretion is reported to be involved in cellular immunity, delayed type hypersensitivity reactions (DHT) and activation of cytotoxic and inflammatory functions (3). Activated CD4 T lymphocytes of the Th2 profile produce essentially IL-4, IL-5, IL-10 and IL-13. Th1 and Th2 pathways each enhances the development of cells pertaining to the same subset while suppressing the expansion of / or effector functions of the other subset (5, 8 – 10).

Building on these characteristics, the cytokines profile may be termed Type 1 or Type 2 response (3, 6, 8, 9).

**REAGENT**

**IOTest® Anti-IL2-PE Conjugated Antibody**

**PN IM2718U – 2 mL Liquid – 20 µL / test**

**Clone**

N7.48A

**Isotype**

IgG2a, mouse

**Source**

Serafree culture supernatant

**Purification**

Ion exchange or affinity chromatography

**Conjugation**

R-phycocerythrin (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 CONTENT**

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 on the label.

**PRODUCT AVAILABILITY**

IOTest® Anti-IL2-PE Conjugated Antibody

**PN IM2718U – 2 mL Liquid – 20 µL / test**

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.

**TRADEMARKS**

The Beckman Coulter logo and IOTest are trademarks of Beckman Coulter Inc.
(*): 20 µL is the quantity of product sufficient to stain 5 x 10⁵ cells in a standard immunofluorescence assay