Analyte Specific Reagent.
Analytical and performance characteristics are not established.

SPECIFICITY
The ICOS molecule (inducible T-cell costimulator, Inducible Costimulator), also known as CD278 antigen (1), belongs to the CD28 and CTLA-4 cell-surface receptor family and shares 27% and 18% homology with respectively CD28 and CTLA-4.

The CD278 molecule is a disulfide-linked homodimeric T-cell surface glycoprotein of 55-60 kDa whose extracellular region consists of a single immunoglobulin (Ig) superfamily V-set domain (2).

This molecule is encoded by a gene located on the chromosome 2 (2q33) (3).

The CD278 molecule plays an important role in cell-cell signaling, immune responses, and regulation of cell proliferation. While CD27 antigen is not constitutively expressed on naive peripheral blood T cells, it is highly expressed on unstimulated thymocytes of germainal centers, showing a role in T cell differentiation (4).

Upon activation by antigen presenting cells, T cells (CD4 positive cells and CD8 positive cells) express inducible co-stimulatory receptors, including CD28, CTLA4 and ICOS (5 – 9). The resulting interaction of CD278 (ICOS) with its ligand ICOS-L (B7-like molecule present on B cells) participates to interleukin production, especially IL-10 and IL4 (10 – 13).

The central role of CD278 in the generation and maintenance of humoral immunity has also been shown to be important. Upon the co-stimulation of T cells through ICOS and CD28, ICOS binds its ligand ICOS-L (6, 10) leading to IgG and IgM secretion as well as IgE production (4, 14).

It is not expressed on resting peripheral T cells, B cells, NK cells, monocytes/macrophages, platelets and granulocytes.

REAGENT
IOTest CD278 (ICOS)-APC
Conjugated Antibody
PN B36127 - 0.5 mL - Liquid

Clone
ISA-3

Type
IgG1, Mouse

Immunogen
Activated T Lymphocytes

Hybridoma
X63 x balb/c

Source
Ascites fluid or supernatant of in vitro cultured hybridoma cells

Purification
Affinity chromatography

Conjugation
Allophycocyanin (APC)

Molar Ratio
APC / Ig : 0.5 - 1.5

Fluorescence
Excites at 633/638 nm
Emits at 660 nm

REAGENT CONTENTS
This antibody is provided in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin. Concentration: See lot specific Certificate of Analysis at www.beckmancoulter.com.

STATEMENTS OF WARNING
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. 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 conditions yields hydrazoic acid, an extremely toxic compound. Azide 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.

6. Avoid microbial contamination of reagents or incorrect results might deteriorate and the reagent should not be used.

7. Use good laboratory practices when handling this reagent.

8. Any change in the physical appearance of the reagents may indicate deterioration and the reagent should not be used.

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


