

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD27 molecule is a transmembrane disulfide-linked homodimer which belongs to tumor necrosis factor receptor (TNFR) / nerve growth factor receptor (NGFR) family (1, 2).

The molecular weight of the recognized antigen is 55 kDa / 120 kDa under reducing / non reducing conditions respectively (1).

The CD27 glycoprotein is found on medullary thymocytes, peripheral T cells, subset of mature B cells and NK cells (3, 4). On T cells, CD27 is preferentially expressed on the CD45RA⁺CD45RO⁻ naive subset of CD4⁺ T lymphocytes whereas most memory T cells (CD45RA⁻CD45RO⁺) lack CD27 (2). Activation of T cells, when involving CD27 molecule, results in the upregulation of CD27 expression as cell surface embedded, and also in the release of a soluble form of CD27 (sCD27) (1, 2, 5).

CD70 antigen, which is a member of the TNF ligand superfamily, interacts with CD27 molecule and is known to be the CD27-ligand (6).

1A4CD27 mAb has been assigned to the CD27 cluster of differentiation during the Vth International Workshop on Human Leukocyte Differentiation Antigens in Boston, 1993 (3, 4).

REAGENT

IOTest CD27-PC5.5
Conjugated Antibody
PN B21444 - 0.5 mL - Liquid

Clone	1A4CD27
Isotype	IgG1, Mouse
Immunogen	PHA stimulated human T cells
Hybridoma Source	NS1 x balb/c Ascites fluid or supernatant of in vitro cultured hybridoma cells.
Purification	Affinity chromatography
Conjugation	R Phycoerythrin-Cyanine 5.5 (PC5.5)
Molar Ratio	PC5.5 / Ig : 0.5 - 1.5
Fluorescence	Excites at 488 nm Emits at 692 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 with 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. Use good laboratory practices when handling this reagent.

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.

PRECAUTIONS

Due to the tandem structure of the fluorochrome, PC5.5 also emits light at 575 nm. This secondary emission peak varies from lot-to-lot of PC5.5. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a PC5.5-conjugate.

SELECTED RESEARCH REFERENCES

1. Sugita, K., Torimoto, Y., Nojima, Y., Daley, J.F., Schlossman, S.F., Morimoto, C., "The 1A4 molecule (CD27) is involved in T-cell activation", 1991, J. Immunol., 147, 1477-1483.
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3. Morimoto, C., "CD27 cluster report", 1995, in Leucocyte Typing V, White Cell Differentiation Antigens, Schlossman, S.F., et al., Eds., Oxford Univ. Press, p. 356-357.

4. Ritz, J., Trinchieri, G., Lanier, L.L., "NK-cell antigens: section report", 1995 in Leucocyte Typing V, White Cell Differentiation Antigens, Schlossman, S.F., et al., Eds., Oxford Univ. Press, p. 1367-1372.
5. Hintzen, R.Q., de Jong, R., Hack, C.E., Chamuleau, M., de Vries, E.F.R., ten Berge, I.J.M., Borst, J., van Lier, R.A.W., "A soluble form of the human T-cell differentiation antigen CD27 is released after triggering of the TCR / CD3 complex", 1991, J. Immunol., 147, 29-35.
6. Bowman, M.R., Crimmins, M.A.V., Yetz-Adalpe, J., Kriz, R., Kelleher, K., Herrmann S., "The cloning of CD70 and its identification as the ligand for CD27", 1994, J. Immunol., 152, 1756-1761

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