IOTest CD39-PE

PN B55384 – 1 mL – Liquid – Clone BA54

Analyte Specific Reagent.
Analytical and performance characteristics are not established

IOTest

CD39-PE

PN B55384

Conjugated Antibody
Liquid - 1 mL

Specifications	
Clone	BA54
Hybridoma	NS1 x balb/c
Immunogen	CD4+CD8+ thymic clone B12
Isotype	IgG1 kappa
Species	Mouse
Source	Ascites fluid or supernatant of in vitro cultured hybridoma cells.
Purification	Affinity chromatography
Fluorochrome	R Phycoerythrin (PE)
Molar ratio	PE / Ig: 0.5 - 1.5
λ excitation	488 nm
Emission Peak	575 nm
Buffer	PBS pH 7.2 plus 2 mg / mL BSA and 0.1% NaN_3

SPECIFICITY

The CD39 molecule, also known as ectonucleoside triphosphate diphospho-hydrolase-1 (ENTPD1), is a 70-100kDa integral membrane glycoprotein with two transmembrane domains (1). It belongs to the family of the primary enzymes responsible for cell surface nucleotide hydrolysis, with ATPase and ADPase activity.
CD39 antigen is expressed on activated lymphocytes, regulatory T cells, B cells, and dendritic cells (2). It is involved in control of the extracellular nucleoside triphosphate pool (NTP), suppression of inflammation and control of platelet activation (3, 4, 5).
The coordinated expression of CD39/CD73 on Tregs and the adenosine A2A receptor on activated T effector cells generates immunosuppressive loops. In human studies, it has been reported that CD4+CD25-CD39+ T cells are T inducers (5, 6).
BA54 monoclonal antibody has been assigned to the CD39 cluster of differentiation during the 5th HLDA held in Boston, USA, in 1995 (WS Code: T17, p.383) (7, 8).

REAGENT CONTENTS

Concentration: See lot specific Certificate of Analysis at www.beckmancoulter.com.

PRECAUTIONS

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

1. Jones, M. and Mason D. CD39 Workshop Panel report. Leucocyte Typing VI, White Cell Differentiation Antigens. T. Kishimoto et al., Eds. Garland Publishing, 1998, 157-159.
2. Borsellino et al. Expression of ectonucleotidase CD39 by Foxp3+ Treg cells: hydrolysis of extracellular ATP and immune suppression. Blood, 2007, 110: 1225-1232.
3. Zou, Q.et al. Isolated CD39 Expression on CD34+ T cells denotes both regulatory and memory populations. Am. J transplant. 2009, 9 (10): 2303-2311.
4. Goepfert C; Imai M; Brouard S et al. CD39 modulates endothelial cell activation and apoptosis. Mol. Med. 2001, 6 (7), 591–603.
5. Dwyer, K.M. et al. Expression of CD39 by human peripheral blood CD4+CD25+ T cells denotes a regulatory memory phenotype. American journal of transplantation, 2010, 10: 2410-2420.
6. André, S.et al. Surveillance of antigen-presenting cells by CD4+CD25+ regulatory T cells in autoimmunity, The American Journal of pathology, 2009, 174, 5.
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8. Gouttefangeas, C. et al. The CD39 molecule defines distinct cytotoxic subsets within alloactivated human CD8-positive cells. Eur. J. Immunol. 1992, 22, 2681-2685.

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BECKMAN COULTER

PN B55384 – 1 mL – Liquid – Clone BA54

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