

Monoclonal Antibody to CD39 / ENTPD1 - PE

Alternate names:	ATPDase, Ecto-ATP diphosphohydrolase, Ecto-apyrase, Ectonucleoside triphosphate diphosphohydrolase 1, Lymphoid cell activation antigen, NTPDase 1
Catalog No.:	SM1101RT
Quantity:	25 Tests
Concentration:	0.1 mg/ml
Background:	<p>Human CD39 is found on most mature B cells, activated NK cells and activated T cells. CD39 is also weakly expressed on granulocytes. CD39 has homology to the Nmyc family of proteins and was recently cloned. CD39 can hydrolyze both nucleoside triphosphates and diphosphates. CD39 is the dominant ecto nucleotidase of vascular and placental trophoblastic tissues and appears to modulate the functional expression of type 2 purinergic (P2) G protein coupled receptors (GPCRs). CD39 transgenic mice exhibit impaired platelet aggregation, prolonged bleeding times, and resistance to systemic thromboembolism. There is a correlation between ATP hydrolysis and triglycerides in patients with chronic heart disease, suggesting a relationship between ATP diphosphohydrolase and thrombogenesis.</p> <p>Depolarization causes the endothelial production of superoxide, which inhibits the activity of endothelial CD39 and enhances platelet aggregation. After exercise, all subjects showed a significant reduction of CD39 expression in platelet and an increase of CD39 expression in B lymphocytes.</p>
Uniprot ID:	P49961
NCBI:	NP_001091645.1
GeneID:	953
Host / Isotype:	Mouse / IgG1
Clone:	A1
Immunogen:	PHA activated human lymphocytes
Format:	<p>State: Lyophilized purified IgG fraction.</p> <p>Purification: Affinity Chromatography on Protein G.</p> <p>Buffer System: PBS, pH 7.4 containing 0.09% Sodium Azide as preservative and 1% BSA as stabilizer.</p> <p>Label: PE – R. Phycoerythrin (RPE)</p> <p>Reconstitution: Restore with 1.0 ml distilled water.</p>
Applications:	<p>Flow Cytometry: Use 10 µl of Neat antibody to label 10e6 cells or 100 µl whole blood. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.</p>

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com

Specificity:

This antibody binds to the Human CD39 cell surface antigen, a 70-100 kD molecule expressed on peripheral blood B cells, monocytes and T cell clones. CD39 has intrinsic ecto-ATPase activity. Expression is induced on T cells and increased on B cells as a late activation antigen.

This antibody has been shown to block MHC independent target cell recognition by hapten-specific CTL. SM1101A is recommended for this purpose (Ref.8).

Species: Human.

Other species not tested.

Storage:

Prior to and following reconstitution store the antibody undiluted at 2-8°C.

This product is photosensitive and should be protected from light.

DO NOT FREEZE!

Shelf life: one year from despatch.

General References:

1. Aversa, G.G. et al. (1988) Detection of a late lymphocyte activation marker by A1, A new monoclonal antibody. *Transpl. Proc.* 20: 49 - 52
2. Waugh, J.A. et al. (1989) Staining of normal and rejecting kidney using the activation panel. In: *Leucocyte Typing IV. White cell differentiation antigens.* Edited by Knapp, W. et al. Oxford University Press. p485.
3. Aversa, G.G. and Hall, B.M. (1989) Activation panel antigen expression on PBL activated by PHA or in MLR. In: *Leucocyte Typing IV. White cell differentiation antigens.* Edited by Knapp, W. et al. Oxford University Press, p.498.
4. Aversa, G.G. et al. (1989) Use of monoclonal antibodies to study in vivo and in vitro activated lymphocytes. *Transpl. Proc.* 21: 349 - 350
5. Stein, H., Schwarting R. et al. (1989) Activated Section report. In: *Leucocyte Typing IV. White cell differentiation antigens.* Edited by Knapp, W. et al. Oxford University Press, p.387.
6. Aversa, G.G. and Hall, B.M. (1991) Cell surface markers of T cell activation. *Transplantation Reviews* 5: 9.
7. Suranyi, M.G. et al. (1991) Lymphocyte adhesion molecules in T cell mediated lysis of kidney cells. *Kidney International.* 39: 312 - 319
8. Stockl, J. et al. (2001) Monomorphic molecules function as additional recognition structures on haptenated target cells for HLA-A1 restricted, hapten-specific CTL. *J. Immunol.* 167: 2724-2733.

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