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10-3554: Monoclonal Antibody to human CD73(Discontinued)

Clonality :	Monoclonal
Clone Name :	4G4
Application :	FACS
Reactivity :	Human
Gene :	NT5E
Gene ID :	4907
Uniprot ID :	P21589
Alternative Name :	NT5,Â NTE, Ecto-5'-nucleotidase, CD73
Isotype :	Mouse IgG1
Immunogen Information :	Inflamed synovial stroma from rheumatoid arthritis patients

Description

The monoclonal antibody 4G4 recognizes both membrane bound and soluble human CD73, also known as ecto-5Â'-nucleotidase. CD73 is a 70-kDa GPI-anchored cell surface molecule and belongs to the 5Â'-nucleosidase family. CD73 is useful as marker for lymphocyte differentiation. It is abundantly expressed on the vascular endothelium and at a low level on certain subpopulations of human lymphocytes. Like many glycosyl-phosphatidylinositol (GPI)-anchored molecules, it transmits potent activation signals in T cells when ligated by antibodies. CD73 hydrolyzes extracellular nucleotides into membrane permeable nucleosides. Ecto-5Â'-nucleotidase activity is an important mediator of the anti-inflammatory effect by converting extracellular AMP into a potent anti-inflammatory substance adenosine. CD73 has been shown to function as a co-stimulatory molecule in human T cells and to have a role in regulating lymphocyte adhesion. Triggering of CD73 on the surface of lymphocytes, but not on endothelial cells, results in the shedding of the CD73 and increased adhesion of lymphocytes to endothelium via LFA-1 clustering. Furthermore, CD73 has been implicated to mediate homing of skin-infiltrating lymphocytes in vivo. In B-cell chronic lymphocytic leukemia the expression of CD73 is decreased. Besides this, CD73 activity has been implicated as sensitive and useful indicator for mild zinc deficiency. The monoclonal antibody 4G4 causes a reduction in CD73 expression on lymphocytes, reduces enzyme activity, and inhibits the binding of lymphocytes to endothelial cells.

Product Info

Amount :	Monoclonal Antibody to human CD73(Discontinued) / 500 µg
Content :	0.5 mg 0.2 µm filtered protein G purified antibody solution in PBS containing 0.1% bovine serum albumin. The endotoxin concentration is < 24 EU/mg, determined with HIT302 LAL Assay.
Storage condition :	Product should be stored at 4 °C. Under recommended storage conditions, product is stable for one year.

Application Note

IHC-F: Tissue sections were fixed in acetone.- As positive control anti-CD31 was used and as negative control an isotype antibody. FACS Analysis: Antibody 4G4 stains the extracellular domain of CD73. As positive control anti-CD3- was used and as negative control an irrelevant antibody. Functional Studies: Antibody 4G4 functions as an inhibitor of lymphocyte binding to HUVEC. The antibody was functionally tested by incubating the lymphocytes with the antibody before adding the lymphocytes to an EC monolayer. Furthermore the monoclonal antibody 4G4 causes a reduction in CD73 expression on lymphocytes and reduces enzyme activity. Immuno Fluoroscence: HUVEC cells were seeded on gelatin-coated coverslips and stained with antibody. Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.