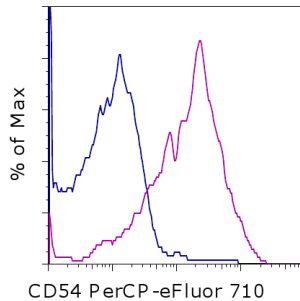


Anti-Rat CD54 (ICAM-1) PerCP-eFluor[®] 710

Catalog Number: 46-0540

Also known as: Intercellular adhesion molecule-1

RUO: For Research Use Only. Not for use in diagnostic procedures.



Staining of rat splenocytes with 0.06 μ g of Mouse IgG1 K Isotype Control PerCP-eFluor[®] 710 (cat. 46-4714) (blue histogram) or 0.06 μ g of Anti-Rat CD54 (ICAM-1) PerCP-eFluor[®] 710 (purple histogram). Cells in the lymphocyte gate were used for analysis.

Product Information

Contents: Anti-Rat CD54 (ICAM-1) PerCP-eFluor[®] 710

REF **Catalog Number:** 46-0540

Clone: 1A29

Concentration: 0.2 mg/mL

Host/Isotype: Mouse IgG1, kappa

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

Temperature Limitation: Store at 2-8°C. Do not freeze. Light-sensitive material.

Batch Code: Refer to vial

Use By: Refer to vial

Contains sodium azide



Description

The 1A29 monoclonal antibody reacts with rat CD54, which is also known as intercellular adhesion molecule 1 (ICAM-1). In the immune system, this type I immunoglobulin (Ig)-like transmembrane protein is expressed on lymphocytes, macrophages, dendritic cells, monocytes, granulocytes, and thymic stromal cells. CD54 is also present on endothelial cells and such non-immune cells as hepatocytes, cardiomyocytes, and vascular smooth muscle cells. In addition, reports demonstrate that CD54 expression can be induced *in vitro* by proinflammatory cytokines, including IFN-gamma, IL-1, CCL2, or TNF-alpha. CD54 plays important roles in transendothelial migration of leukocytes to sites of inflammation and in T cell interactions with antigen presenting cells. Studies indicate that CD54 mediates these functions by binding to lymphocyte function-associated molecule (LFA-1; also known as CD11a/CD18).

The 1A29 antibody has been reported to block interactions between CD54 and LFA-1.

Applications Reported

This 1A29 antibody has been reported for use in flow cytometric analysis.

Applications Tested

This 1A29 antibody has been tested by flow cytometric analysis of rat splenocytes. This can be used at less than or equal to 0.125 μ g per test. A test is defined as the amount (μ g) of antibody that will stain a cell sample in a final volume of 100 μ L. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

PerCP-eFluor[®] 710 can be used in place of PE-Cy5, PE-Cy5.5 or PerCP-Cy5.5. PerCP-eFluor[®] 710 emits at 710 nm and is excited with the blue laser (488 nm). Please make sure that your instrument is capable of detecting this fluorochrome. For a filter configuration, we recommend using the 685 LP dichroic mirror and 710/40 band pass filter, however the 695/40 band pass filter is an acceptable alternative.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 μ L cell sample + 100 μ L IC Fixation

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Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

References

Furuya K, Takeda H, Azhar S, McCarron RM, Chen Y, Ruetzler CA, Wolcott KM, DeGraba TJ, Rothlein R, Hugli TE, del Zoppo GJ, Hallenbeck JM. Examination of several potential mechanisms for the negative outcome in a clinical stroke trial of enlimomab, a murine anti-human intercellular adhesion molecule-1 antibody: a bedside-to-bench study. *Stroke*. 2001 Nov;32(11):2665-74. (1A29, FA)

Knoblach SM, Faden AI. Administration of either anti-intercellular adhesion molecule-1 or a nonspecific control antibody improves recovery after traumatic brain injury in the rat. *J Neurotrauma*. 2002 Sep;19(9):1039-50. (1A29, FA)

Colic M, Drabek D. Expression and function of intercellular adhesion molecule 1 (ICAM-1) on rat thymic macrophages in culture. *Immunol Lett*. 1991 Jun;28(3):251-7. (1A29)

Tamatani T, Miyasaka M. Identification of monoclonal antibodies reactive with the rat homolog of ICAM-1, and evidence for a differential involvement of ICAM-1 in the adherence of resting versus activated lymphocytes to high endothelial cells. *Int Immunol*. 1990;2(2):165-71. (1A29, FA (neutralizing))

Van Seventer GA, Shimizu Y, Horgan KJ, Shaw S. The LFA-1 ligand ICAM-1 provides an important costimulatory signal for T cell receptor-mediated activation of resting T cells. *J Immunol*. 1990 Jun 15;144(12):4579-86.

Related Products

46-4714 Mouse IgG1 K Isotype Control PerCP-eFluor[®] 710 (P3.6.2.8.1)