EXBIO Antibodies

PRODUCT DATA SHEET

10-220-C025

Monoclonal Antibody to CD43 Azide Free (0.025 mg)

Clone: MEM-59

Isotype: Mouse IgG1

Specificity: The antibody MEM-59 recognizes neuraminidase-sensitive epitope on CD43 (Leukosialin), a 95-135 kDa type I transmembrane glycoprotein (mucin-type) which is involved in lymphocyte activation. CD43 is expressed by platelets and at high levels on the surface of all leukocytes; it is negative on resting B lymphocytes and erythrocytes.
HLDA IV; WS Code NL 604
HLDA V; WS Code AS S290

Immunogen: Human T lymphocytes.

Species Reactivity: Human

Application: Flow Cytometry
Recommended dilution:1 µg/ml
Immunoprecipitation
Western Blotting
Immunohistochemistry (paraffin sections)
Positive tissue:spleen, thymus, tonsil
Recommended dilution:10 µg/ml
Functional Application
The antibody MEM-59 activates T lymphocytes and also induces apoptosis in hemopoietic progenitor cells.

Purity: > 95% (by SDS-PAGE)

Purification: Purified from ascites by protein-A affinity chromatography.

Concentration: 1 mg/ml

Storage Buffer: Azide free phosphate buffered saline (PBS), approx. pH 7.4; 0.2 µm filter sterilized.

Storage / Stability: Store at 2-8°C. Do not use after expiration date stamped on vial label. For long-term storage aliquot and store at -20°C. Avoid freeze/thaw cycles.

Expiration: See vial label

Lot Number: See vial label

Background: CD43 (leukosialin, sialophorin) is a transmembrane mucin-like protein with high negative charge, expressed on the surface of most hematopoietic cells. CD43 contributes to a repulsive barrier that interferes with cellular adhesion, however, in certain cases also promotes leukocyte aggregation. By interaction with actin-binding proteins ezrin and moesin CD43 plays a regulatory role in remodeling T-cell morphology and regulates cell-cell interactions during lymphocyte traffic. CD43 signaling both enhances LFA-1 adhesiveness and counteracts LFA-1 induction via other receptors. Expression of CD43 causes induction of functionally active tumour suppressor p53 protein, but in case of p53 and ARF defficiency CD43 promotes tumour proliferation and viability. It appears to be an important modulator of leukocyte functions.

For laboratory research only, not for drug, diagnostic or other use.

EXBIO Praha | Nad Safinou II 341 | 252 42 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz

References:

*Stefanova I, Hilgert I, Kristofova H, Brown R, Low MG, Horejsi V: Characterization of a broadly expressed human leucocyte surface antigen MEM-43 anchored in membrane through phosphatidylinositol. Mol Immunol. 1989 nFeb;26(2):153-61.
*Kadaja L, Laos S, Maimets T: Overexpression of leukocyte marker CD43 causes activation of the tumor suppressor proteins p53 and ARF. Oncogene. 2004 Apr 1;23(14):2523-30.
*Khunkaewla P, Schiller HB, Paster W, Leksa V, Cermák L, Anděra L, Hořejší V, Stockinger H: LFA-1-mediated leukocyte adhesion regulated by interaction of CD43 with LFA-1 and CD147. Mol Immunol. 2007 Nov 8
*Kadaja-Saarepuu L, Laos S, Jääger K, Viil J, Balikova A, Lõoke M, Hansson GC, Maimets T: CD43 promotes cell growth and helps to evade FAS-mediated apoptosis in non-hematopoietic cancer cells lacking the tumor suppressors p53 or ARF. Oncogene. 2007 Sep 24
*Mody PD, Cannon JL, Bandukwala HS, Blaine KM, Schilling AB, Swier K, Sperling AI: Signaling through CD43 regulates CD4 T-cell trafficking. Blood. 2007 Oct 15;110(8):2974-82.
*Stefanova I, Hilgert I, Angelisova P, Kristofova H, Horejsi V: Characterization of a 95 kDa human leucocyte sialoglycoprotein: its identity with CD43, gpL115, leukosialin and sialophorin. Folia Biol (Praha). 1988;34(4):255-65.
*Leukocyte Typing IV., Knapp W. et al. (Eds.), Oxford University Press (1989).
*Leukocyte Typing V., Schlossman S. et al. (Eds.), Oxford University Press (1995).
*Alvarado M, Klassen C, Cerny J, Horejsi V, Schmidt RE: MEM-59 monoclonal antibody detects a CD43 epitope involved in lymphocyte activation. Eur J Immunol. 1995 Apr;25(4):1051-5.
*Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
*Cermak L, Simova S, Pintzas A, Horejsi V, Andera L: Molecular mechanisms involved in CD43-mediated apoptosis of TF-1 cells. Roles of transcription Daxx expression, and adhesion molecules. J Biol Chem. 2002 Mar 8;277(10):7955-61.
*Filatov AV, Krotov GI, Zgoda VG, Volkov Y: Fluorescent immunoprecipitation analysis of cell surface proteins: a methodology compatible with mass-spectrometry. J Immunol Methods. 2007 Jan 30;319(1-2):21-33.
*Simova S, Klima M, Cermak L, Sourkova V, Andera L: Arf and Rho GAP adapter protein ARAP1 participates in the mobilization of TRAIL-R1/DR4 to the plasma membrane. Apoptosis. 2008 Mar;13(3):423-36.

For laboratory research only, not for drug, diagnostic or other use.