SANTA CRUZ BIOTECHNOLOGY, INC.

B Cell Marker (BB6-10A10): sc-52445



BACKGROUND

B cells are lymphocytes that play an essential role in the humoral immune response, as opposed to the cell-mediated immune response that is governed by T cells. The human body makes millions of different types of B cells each day that circulate in the blood and lymph nodes while performing the role of immune surveillance. B cells do not produce antibodies until they are fully activated and each B cell has a unique receptor protein (referred to as the B cell receptor (BCR)) on its surface that binds to one particular antigen. BCR is a membrane-bound immunoglobulin that allows for the distinction of B cells from other types of lymphocytes and is the main protein involved in B cell activation. BCRs are used as B cell markers to identify the presence or absence of a specific type of B cell in serum.

REFERENCES

- 1. Denham, S., Zwart, R.J., Whittall, J.T., Pampusch, M., Corteyn, A.H., Bianchi, A.T., Murtaugh, M.P., Parkhouse, R.M., Tlaskalova, H., Sinkora, J., Sinkora, M. and Rehakova, Z. 1998. Monoclonal antibodies putatively identifying porcine B cells. Vet. Immunol. Immunopathol. 60: 317-328.
- 2. Nakamura, S., Nagahama, M., Kagami, Y., Yatabe, Y., Takeuchi, T., Kojima, M., Motoori, T., Suzuki, R., Taji, H., Ogura, M., Mizoguchi, Y., Okamoto, M., Suzuki, H., Oyama, A., Seto, M., Morishima, Y., Koshikawa, T., Takahashi, T., Kurita, S. and Suchi, T. 1999. Hodgkin's disease expressing follicular dendritic cell marker CD21 without any other B cell marker: a clinicopathologic study of nine cases. Am. J. Surg. Pathol. 23: 363-376.
- 3. Agematsu, K., Hokibara, S., Nagumo, H. and Komiyama, A. 2000. CD27: a memory B cell marker. Immunol. Today 21: 204-206.
- 4. Bleesing, J.J. and Fleisher, T.A. 2002. Human B cells express a CD45 isoform that downregulated with acquisition of the memory B cell marker CD27. Cvtom. B Clin. Cvtom. 51: 1-8.
- 5. Gerberick, G.F., Cruse, L.W., Ryan, C.A., Hulette, B.C., Chaney, J.G., Skinner, R.A., Dearman, R.J. and Kimber, I. 2002. Use of a B cell marker (B220) to discriminate between allergens and irritants in the local lymph node assay. Toxicol. Sci. 68: 420-428.
- 6. Harel, L., Zeharia, A., Kodman, Y., Straussberg, R., Zabriskie, J.B. and Amir, J. 2002. Presence of the d8/17 B cell marker in children with rheumatic fever in Israel. Clin. Genet. 61: 293-298.
- 7. Torlakovic, E., Torlakovic, G., Nguyen, P.L., Brunning, R.D. and Delabie, J. 2002. The value of anti-pax-5 immunostaining in routinely fixed and paraffin-embedded sections: a novel pan pre-B and B cell marker. Am. J. Surg. Pathol. 26: 1343-1350.
- 8. Tomita, S., Mori, K.L., Sakajiri, S. and Oshimi, K. 2003. B cell marker negative lymphoma with rearrangement in the JH gene. Leuk. Lymph. 44: 727-730.
- 9. Ernst, J.A., Li, H., Kim, H.S., Nakamura, G.R., Yansura, D.G. and Vandlen, R.L. 2005. Isolation and characterization of the B cell marker CD20. Biochem. 44: 15150-15158.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

B Cell Marker (BB6-10A10) is a mouse monoclonal antibody raised against B Cell Marker.

PRODUCT

Each vial contains 100 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

B Cell Marker (BB6-10A10) is available conjugated either phycoerythrin (sc-52445 PE, 100 tests in 2 ml) or fluorescein (sc-52445 FITC, 100 tests in 2 ml), for IF, IHC(P) and FCM.

APPLICATIONS

B Cell Marker (BB6-10A10) is recommended for detection of immature population of B cells in the follicles of ILPPs and a subpopulation of slg low B cells in lymph nodes of porcine origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.