SANTA CRUZ BIOTECHNOLOGY, INC.

CD37 (IPO-24): sc-23898

The Power to Question

BACKGROUND

Tetra-spans transmembrane family (TSTF) members (CD9, CD37, CD53, CD63, CD81 and CD82) are cell-surface proteins that are characterized by the presence of four hydrophobic, membrane-spanning domains. TSTF members can mediate signal transduction events influencing the regulation of cell development, adhesion, activation, growth and motility. The human CD37 gene maps to chromosome 19q13.33 and encodes a 281 amino acid protein. CD37 is a cell surface glycoprotein that can complex with integrins and other TSTF proteins and may play a role in T cell-B cell interactions. CD37 is strongly expressed on normal and neoplastic mature slg+ B cells and is detected at low levels on resting and activated T cells, neutrophils, granulocytes and monocytes. Transgenic mouse models elicit no changes in development and cellular composition of lymphoid organs where CD37 is lacking.

REFERENCES

1. Classon, B.J., et al. 1989. The primary structure of the human leukocyte antigen CD37, a species homologue of the rat MRC OX-44 antigen. J. Exp. Med. 169: 1497-1502.
2. Okochi, H., et al. 1997. Expression of tetraspans transmembrane family (CD9, CD37, CD53, CD63, CD81 and CD82) in normal and neoplastic human keratinocytes: an association of CD9 with $\alpha3\beta1$ Integrin. Br. J. Dermatol. 137: 856-863.
3. Maecker, H.T., et al. 1997. The tetraspanin superfamily: molecular facilitators. FASEB J. 11: 428-442.
4. Knobeloch, K.P., et al. 2000. Targeted inactivation of the tetraspanin CD37 impairs T cell-dependent Bcell response under suboptimal costimulatory conditions. Mol. Cell. Biol. 20: 5363-5369.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 227400. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Zhao, X., et al. 2007. Targeting CD37-positive lymphoid malignancies with a novel engineered small modular immunopharmaceutical. Blood 110: 2569-2577.
7. Meyer-Wentrup, F., et al. 2007. Dectin-1 interaction with tetraspanin CD37 inhibits IL-6 production. J. Immunol. 178: 154-162.
8. Gartlan, K.H., et al. 2010. A complementary role for the tetraspanins CD37 and Tssc6 in cellular immunity. J. Immunol. 185: 3158-3166.

CHROMOSOMAL LOCATION

Genetic locus: CD37 (human) mapping to 19q13.33.

SOURCE

CD37 (IPO-24) is a mouse monoclonal antibody raised against spleen cells of a patient with hairy cell leukemia.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD37 (IPO-24) is available conjugated to either phycoerythrin (sc-23898 PE) or fluorescein (sc-23898 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

CD37 (IPO-24) is recommended for detection of CD37 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

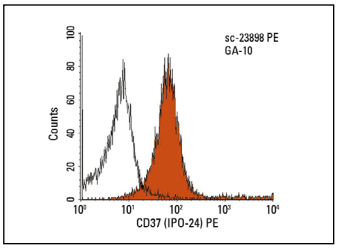
Suitable for use as control antibody for CD37 siRNA (h): sc-42784, CD37 shRNA Plasmid (h): sc-42784-SH and CD37 shRNA (h) Lentiviral Particles: sc-42784-V.

Molecular Weight of CD37: 32 kDa.

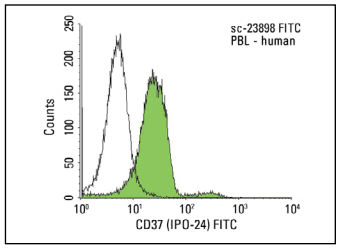
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD37 (IPO-24) PE: sc-23898 PE. FCM analysis of GA-10 cells. Black line histogram represents the isotype control, normal mouse IgG_{2b}-PE: sc-2868.



CD37 (IPO-24) FITC: sc-23898 FITC. FCM analysis of human peripheral blood B lymphocytes. Black line histogram represents the isotype control, normal mouse IgG_{2b}-FITC: sc-2857.

SELECT PRODUCT CITATIONS

1. Leshchenko, V.V., et al. 2010. Genomewide DNA methylation analysis reveals novel targets for drug development in mantle cell lymphoma. Blood 116: 1025-1034.

RESEARCH USE

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

PROTOCOLS

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