

CD23 (BU38): sc-58995

BACKGROUND

The human leukocyte differentiation antigen CD23 (FCE2) is a type II integral membrane glycoprotein that is expressed on mature B cells, monocytes, eosinophils, platelets and dendritic cells. In mouse, CD23 is found only on mature B cells. CD23 is a low affinity IgE receptor that mediates IgE-dependent cytotoxicity and phagocytosis by macrophages and eosinophils. CD23 associates as an oligomer where cooperative binding of at least two lectin domains is required for high affinity IgE binding to CD23. It may play a role in antigen presentation by B cells by interacting with CD40. CD23 has been shown to be associated with the Fyn tyrosine kinase. The truncated molecule can be secreted, then function as a potent mitogenic growth factor. ADAM8, ADAM15 and MDC-L catalyze ectodomain shedding of CD23. Intestinal cells coexpress CD23a and CD23b, and the two splice forms show different localizations in polarized cells.

REFERENCES

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2. Gordon, J., et al. 1991. Inhibition of interleukin-4 promoted CD23 production in human B lymphocytes by transforming growth factor β , interferons or anti-CD19 antibody is overridden on engaging CD40. *Eur. J. Immunol.* 21: 1917-1922.
3. Sugie, K., et al. 1991. Fyn tyrosine kinase associated with Fc ϵ RII/CD23: possible multiple roles in lymphocyte activation. *Proc. Natl. Acad. Sci. USA* 88: 9132-9135.
4. Maekawa, N., et al. 1992. Induction of Fc ϵ RII/CD23 on PHA-activated human peripheral blood T lymphocytes and association of Fyn tyrosine kinase with Fc ϵ RII/CD23. *Int. J. Tissue React.* 14: 121-130.
5. Sutton, B.J., et al. 1993. The human IgE network. *Nature* 366: 421-428.
6. Yu, P., et al. 1994. Negative feedback regulation of IgE synthesis by murine CD23. *Nature* 369: 753-756.
7. Yasui, T., et al. 1996. The roles of CD42 and CD23 in IgE regulation. *Adv. Exp. Med. Biol.* 409: 349-354.
8. Cho, S.W., et al. 1997. B cell activation and Ig, especially IgE, production is inhibited by high CD23 levels *in vivo* and *in vitro*. *Cell. Immunol.* 10: 36-46.

CHROMOSOMAL LOCATION

Genetic locus: FCER2 (human) mapping to 19p13.2; Fc ϵ R2a (mouse) mapping to 8 A1.1.

SOURCE

CD23 (BU38) is a mouse monoclonal antibody raised against full length native CD23 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD23 (BU38) is recommended for detection of CD23 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

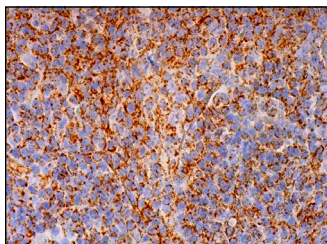
Suitable for use as control antibody for CD23 siRNA (h): sc-29976, CD23 siRNA (m): sc-29977, CD23 shRNA Plasmid (h): sc-29976-SH, CD23 shRNA Plasmid (m): sc-29977-SH, CD23 shRNA (h) Lentiviral Particles: sc-29976-V and CD23 shRNA (m) Lentiviral Particles: sc-29977-V.

Molecular Weight of soluble CD23: 37 kDa.

Molecular Weight of CD23 membrane: 45 kDa.

Positive Controls: Daudi cell lysate: sc-2415, CCRF-CEM nuclear extract: sc-2146 or human platelet extract: sc-363773.

DATA



CD23 (BU38): sc-58995. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic staining of cells in germinal center and cells in non-germinal center.

SELECT PRODUCT CITATIONS

1. Pfanzagl, B., et al. 2017. Activation of the ileal neuroendocrine tumor cell line P-ST5 by acetylcholine is amplified by histamine: role of H3R and H4R. *Sci. Rep.* 7: 1313.

STORAGE

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

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.