SANTA CRUZ BIOTECHNOLOGY, INC.

# CD23 (M-282): sc-9152

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

## 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


1. Yokota, A., et al. 1988. Two species of human Fc ε receptor II (Fc ε RII/CD23): tissue-specific and IL-4-specific regulation of gene expression. Cell 55: 611-618.
2. 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.


## CHROMOSOMAL LOCATION

Genetic locus: Fcer2a (mouse) mapping to 8 A1.1.

## SOURCE

CD23 (M-282) is a rabbit polyclonal antibody raised against amino acids 50-331 of CD23 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CD23 (M-282) is recommended for detection of CD23 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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), 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 (m): sc-29977, CD23 shRNA Plasmid (m): sc-29977-SH and CD23 shRNA (m) Lentiviral Particles: sc-29977-V.

Molecular Weight of CD23 soluble form: 37 kDa.

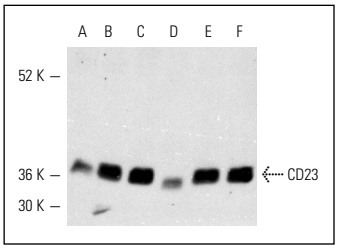
Molecular Weight of CD23 membrane form: 45 kDa.

Positive Controls: $BC_3H1$ cell lysate: sc-2299, CTLL-2 cell lysate: sc-2242 or F9 cell lysate: sc-2245.

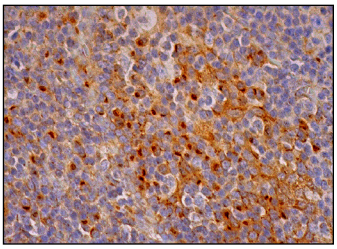
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA




CD23 (M-282): sc-9152. Western blot analysis of CD23 expression in $BC_3H1$ (**A**), CTLL-2 (**B**), F9 (**C**), KNRK (**D**), NIH/3T3 (**E**) and RAW 264.7 (**F**) whole cell lysates.



CD23 (M-282): sc-9152. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic staining of cells in germinal centers and cells in non-germinal centers.

## SELECT PRODUCT CITATIONS


1. Lewis G, et al. 2004. Hyper IgE in New Zealand black mice due to a dominant-negative CD23 mutation. Immunogenetics 10: 564-571.
2. Yang, Q., et al. 2013. Antigen-specific immunotherapy regulates B cell activities in the intestine. J. Biol. Chem. 288: 16383-16390.
3. Yang, Q., et al. 2013. Specific antigen vaccination modulates memory B cell activities. J. Biol. Chem. E-Published.


## 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.