

# CD23 (H-4): sc-271900

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: FCER2 (human) mapping to 19p13.3; Fcer2a (mouse) mapping to 8 A1.1.

## SOURCE

CD23 (H-4) is a mouse monoclonal antibody raised against amino acids 50-331 of CD23 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD23 (H-4) is available conjugated to agarose (sc-271900 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271900 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271900 PE), fluorescein (sc-271900 FITC), Alexa Fluor® 488 (sc-271900 AF488), Alexa Fluor® 546 (sc-271900 AF546), Alexa Fluor® 594 (sc-271900 AF594) or Alexa Fluor® 647 (sc-271900 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271900 AF680) or Alexa Fluor® 790 (sc-271900 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

CD23 (H-4) is recommended for detection of CD23 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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 CD23 membrane: 45 kDa.

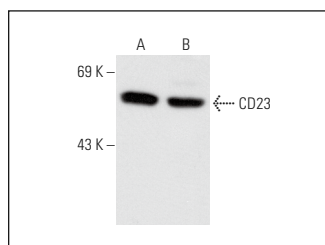
Molecular Weight of soluble CD23: 37 kDa.

Positive Controls: F9 cell lysate: sc-2245, NIH/3T3 whole cell lysate: sc-2210 or Daudi cell lysate: sc-2415.

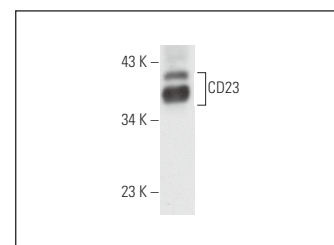
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 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.

## DATA



CD23 (H-4): sc-271900. Western blot analysis of CD23 expression in F9 (A) and NIH/3T3 (B) whole cell lysates.



CD23 (H-4): sc-271900. Western blot analysis of CD23 expression in Daudi whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Yang, Q., et al. 2012. Specific antigen vaccination modulates memory B cell activities. J. Biol. Chem. E-published.
2. Yang, Q., et al. 2013. Antigen-specific immunotherapy regulates B cell activities in the intestine. J. Biol. Chem. 88: 16383-16390.
3. Zhao, X., et al. 2017. JNK1 negatively controls antifungal innate immunity by suppressing CD23 expression. Nat. Med. 23: 337-346.
4. Guo, Y., et al. 2018. C-Type lectin receptor CD23 is required for host defense against *Candida albicans* and *Aspergillus fumigatus* infection. J. Immunol. pii: j1800620.

## 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](http://www.scbt.com) for detailed protocols and support products.

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