

# CD21 (D-19): sc-7028

## BACKGROUND

CD21 (also known as complement receptor (CR) type 2) is a type I integral membrane glycoprotein that serves as a receptor for the C3d complement fragment and for the Epstein-Barr virus. It plays a role in B cell activation and proliferation and undergoes phosphorylation after B cell activation with phorbol esters. CD21 is expressed on mature B cells, follicular dendritic cells, pharyngeal and cervical epithelial cells and a subset of thymocytes. The adaptive immune response is tightly regulated to limit responding cells in an antigen-specific manner. On B cells, co-receptors CD21/CD19 modulate the strength of B cell  $\text{A}_\gamma$  receptor (BCR) signals, thereby influencing cell fate. CD21 is normally expressed during the immature and mature stages of B cell development. In association with CD19, CR21 plays an important role in enhancing mature B cell responses to foreign antigens.

## REFERENCES

1. Tanner, J., et al. 1987. Epstein-Barr virus gp350/220 binding to the B lymphocyte C3d receptor mediates adsorption, capping, and endocytosis. *Cell* 50: 203-213.
2. Ahearn, J.M., et al. 1989. Structure and function of the complement receptors, CR1 (CD35) and CR2 (CD21). *Adv. Immunol.* 46: 183-219.

## CHROMOSOMAL LOCATION

Genetic locus: Cr2 (mouse) mapping to 1 H6.

## SOURCE

CD21 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CD21 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7028 P, (100  $\mu\text{g}$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as fluorescein conjugate for immunofluorescence, sc-7028 FITC, 200  $\mu\text{g}/1\text{ ml}$ .

## APPLICATIONS

CD21 (D-19) is recommended for detection of CD21 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu\text{g}$  per 100-500  $\mu\text{g}$  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 CD21 siRNA (m): sc-29975, CD21 shRNA Plasmid (m): sc-29975-SH and CD21 shRNA (m) Lentiviral Particles: sc-29975-V.

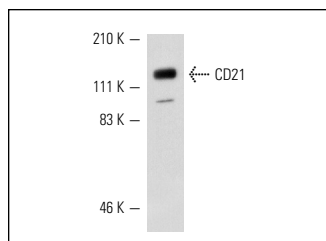
Molecular Weight of CD21: 145 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213.

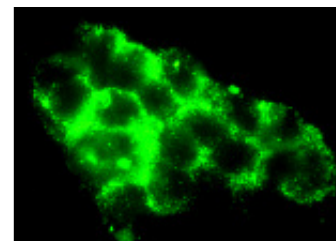
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



CD21 (D-19): sc-7028. Western blot analysis of CD21 expression in WEHI-231 whole cell lysate.



CD21 (D-19): sc-7028. Immunofluorescence staining of methanol-fixed WEHI-231 cells showing membrane localization.

## SELECT PRODUCT CITATIONS

1. Hasegawa, M., et al. 2001. CD19 can regulate B lymphocyte signal transduction independent of complement activation. *J. Immunol.* 167: 3190-3200.
2. Casola, S., et al. 2006. Tracking germinal center B cells expressing germ-line immunoglobulin  $\gamma 1$  transcripts by conditional gene targeting. *Proc. Natl. Acad. Sci. USA* 103: 7396-7401.
3. Chen, Y., et al. 2012. Activation of liver X receptor induces macrophage interleukin-5 expression. *J. Biol. Chem.* 287: 43340-43350.

## 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.

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Satisfaction  
Guaranteed

Try **CD21 (A-3): sc-13135**, our highly recommended monoclonal alternative to CD21 (D-19). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **CD21 (A-3): sc-13135**.