Human CD21 Alexa Fluor® 488-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4909G
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD21 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human CD21 Ile21-Arg971 Accession # P20023
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CD21, also known as complement receptor 2 (CR2), is a 145 kDa N-glycosylated member of the RCA (regulators of complement activation) family of proteins. The complement cascade plays an important role in the innate immune system through the recognition and clearance of immune complexes and foreign particles (1). Mature human CD21 contains a 951 aa extracellular domain (ECD) with fifteen tandem SCR/SUSHI repeats, a 28 aa transmembrane segment, and a 34 aa cytoplasmic tail (2, 3). Within the ECD human CD21 shares 67% aa identity with mouse and rat CD21. Human CD21 and CD35 are encoded by two separate genes, but in mouse partially homologous proteins are alternate splice forms of one gene (4). Alternate splicing of human CD21 generates isoforms with an altered SCR8 or an insertion between SCR10 and SCR11 (5). CD21 is primarily expressed on B cells, follicular dendritic cells, and T cells. A circulating soluble form of CD21 is released by proteolytic shedding from activated B cells (6, 7). CD21 binds the complement component fragments iC3b, C3d, and C3d,g (1, 8). It forms a complex with the B cell receptor-associated CD19 molecule and lowers the threshold for B cell activation (9-11). CD21 can also form complexes with the complement receptor CD35/CR1 (1, 10). Mice deficient in both CD21 and CD35 exhibit normal B cell development but severely compromised germinal center development, antibody production, establishment of protective microbial immunity, and B cell tolerance to self antigens (12, 13). In mice, CD21/CD35 must additionally be present on follicular dendritic cells to mount effective humoral responses and establishment of B cell memory (14). CD21 also binds the gp350 coat protein on Epstein-Barr virus and serves as an uptake receptor for viral infection of B cells (15).

PRODUCT SPECIFIC NOTICES

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