Anti-dCD20c1–mIgG2a

Monoclonal mouse IgG2a antibody against dog CD20

Catalog # dcd20-mab11

For research use only, not for diagnostic or therapeutic use

Version # 15J27-MM

PRODUCT INFORMATION

Content: 100 µg purified anti-dCD20c1-mIgG2a antibody, provided azide-free and lyophilized.

Clone: 6C12

Isotype: Mouse IgG2a

Formulation: 0.2 µm filtered solution in 68 mM phosphate buffer with 91 mM glycine, 5% w/v saccharose and stabilizing agents.

Antibody resuspension

Add 1 ml of sterile water to obtain a concentration of 0.1 mg/ml.

Storage

- Product is shipped at room temperature. Store lyophilized antibody at -20 °C. Lyophilized product is stable for 1 year.
- Reconstituted antibody is stable for 1 month when stored at 4 °C and 6 months when aliquoted and stored at -20 °C. Avoid repeated freeze-thaw cycles.

Quality control

- The absence of bacterial contamination (e.g. endotoxins and peptidoglycans) is confirmed by using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.
- The antibody is validated for flow cytometry using cells that stably express dog CD20.

BACKGROUND

CD20 is a transmembrane phosphoprotein that is expressed on the surface of B lymphocytes. The CD20 antigen is present on both resting and activated B lymphocytes but is lost prior to differentiation into plasma cells. As CD20 expression is restricted to B cells, this antigen is a useful marker or target for B-cell lymphomas[1]. Studies demonstrate that the expression of CD20 correlates with B-cell lymphoma in dogs[2]. In human medicine, an anti-human CD20 monoclonal antibody (Rituximab) has been used to treat B-cell non-Hodgkin's lymphoma. This antibody was tested for B-cell binding and depletion in canine B-cells *ex vivo*; however, this human therapeutic is not able to bind or deplete canine B-cells[3, 4]. Thus, there is a need for specific antibodies directed against dog CD20. Such antibodies can be used to investigate CD20 as a therapeutic target in canine lymphoma.

1. Kosmas C. *et al.*, 2002. Anti-CD20-based therapy of B cell lymphoma: state of the art. Leukemia. 16(10):2004-15. **2. Jubala C. *et al.*, 2005.** CD20 Expression in Normal Canine B Cells and in Canine non-Hodgkin Lymphoma. Vet. Path. 42:468-76. **3. Crow S., 2008.** Chemoimmunotherapy for canine lymphoma: tumor vaccines and monoclonal antibodies. Cancer Therapy 6;181-6. **4. Impellizeri J. *et al.*, 2006.** The role of rituximab in the treatment of canine lymphoma: An ex vivo evaluation. Vet. J. 171:556-8.

DESCRIPTION

Anti-dCD20c1-mIgG2a is a mouse monoclonal antibody that specifically targets dog CD20 (dCD20). In flow cytometry applications, this antibody has exhibited weak cross-reactivity with human CD20. Reactivity with other species has not been tested. Anti-dCD20c1-mIgG2a was generated by DNA immunization. This antibody has been screened for the ability to bind dCD20 and induce complement-dependent cytotoxicity (CDC). It has been produced in hybridomas and purified by affinity chromatography with protein A. This antibody is not suitable for immunohistochemical staining.

APPLICATIONS

B-cell depletion

Anti-dCD20c1-mIgG2a can be used in mice with dog-derived tumor xenografts. This antibody targets the dog CD20 antigen found on the surface of malignant and normal B lymphocytes. Binding of Anti-dCD20c1-mIgG2a to dCD20 results in cell destruction through different mechanisms, including direct signaling of apoptosis, complement activation and cell-mediated cytotoxicity.

Flow Cytometry

Anti-dCD20c1-mIgG2a was used at 500 - 2000 ng/10^6 cells with a FITC goat anti-mouse light chain secondary antibody for indirect immunofluorescence staining of cells expressing dCD20 by flow cytometry.

RELATED PRODUCTS

Product	Catalog Code
Anti-dCD20c1-dIgG2	dcd20-mab1
Anti-dCD20c2-dIgG2	dcd20-mab2
Anti-dCD20c3-dIgG2	dcd20-mab3

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