

Anti-hCD20-hIgG1fut

Non-fucosylated monoclonal human IgG1 antibody against human CD20

Catalog code: hcd20-mab13, hcd20-mab13-03

<https://www.invivogen.com/anti-human-cd20-igg1fut-rituximab>

For research use only, not for diagnostic or therapeutic use

Version 23L21-MM

PRODUCT INFORMATION

Contents: Anti-hCD20-hIgG1fut purified monoclonal antibody (mAb) is provided azide-free and lyophilized. It is available in two quantities:

hcd20-mab13: 100 µg Anti-hCD20-hIgG1fut

hcd20-mab13-03: 3 x 100 µg Anti-hCD20-hIgG1fut

Target: Human CD20

Clonality: Monoclonal antibody

Isotype: Human IgG1fut, kappa

Source: CHO cells

Formulation: 0.2 µm filtered solution in sodium phosphate buffer with glycine, saccharose, and stabilizing agents

Purity: Purified by affinity chromatography with protein G

Storage and stability

- Product is shipped at room temperature. Upon receipt, store at -20°C.

- Reconstituted antibody is stable for 1 month when stored at 4°C and for 1 year when aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles.

Quality control

- Binding to human CD20 has been tested using flow cytometry.

- The complete sequence of this antibody has been verified.

- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

DESCRIPTION

Anti-hCD20-hIgG1fut features the variable region of rituximab and the constant region of the human IgG1 isotype. Rituximab is a mouse/human chimeric monoclonal antibody that targets the CD20 antigen found on the surface of malignant and normal B lymphocytes. Binding of rituximab to CD20 results in cell destruction through different mechanisms including direct signaling of apoptosis, complement activation and cell-mediated cytotoxicity. Rituximab has been approved by the FDA for the treatment of various lymphoid malignancies, including B-cell non-Hodgkin's lymphoma and B-cell chronic lymphocytic leukemia.

Anti-hCD20-hIgG1fut is a non-fucosylated antibody. The absence of the fucose residue from the N-glycans of IgG-Fc results in dramatic enhancement of antibody-dependent cellular cytotoxicity (ADCC) without any detectable change in complement-dependent cytotoxicity (CDC) or antigen binding capability^{1,2}.

Anti-hCD20-hIgG1fut was generated by recombinant DNA technology. It has been produced in CHO cells that are deficient for fucosylation and purified by affinity chromatography with protein G.

1. Yamane-Ohnuki N. & Satoh M., 2009. Production of therapeutic antibodies with controlled fucosylation.corresponding MABs. 1(3): 230–236. **2. Mizushima T., 2011.** Structural basis for improved efficacy of therapeutic antibodies on defucosylation of their Fc glycans. Genes Cells. 16(11): 1071–1080.

APPLICATIONS

Anti-hCD20-hIgG1fut can be used with anti-hCD20-hIgG1 to compare the ADCC activity.

ANTIBODY ISOTYPE COLLECTION

For your research, InvivoGen provides an anti-hCD20 isotype collection. This collection consists of monoclonal antibodies comprising the variable region of rituximab, and the constant region of human (h) and mouse (m) isotypes; hIgG1, hIgG1fut, hIgG1NQ, hIgG2, hIgG3, hIgG4, hIgG4(S228P), hIgA2, mIgG1, and mIgG2a. The isotypes differ in their functional locations and effector functions, such as complement-dependent cytotoxicity (CDC) and antibody-dependent cell-mediated cytotoxicity (ADCC), as presented in the table below.

Effector functions	Human isotypes							Mouse isotypes	
	IgG1	IgG1 fut	IgG1 NQ	IgG2	IgG3	IgG4 and IgG4 (S228P)	IgA2	IgG1	IgG2a
ADCC	++	++++	-	+/-	++	+/-	+	+/-	++
ADCP	+++	+++	-	+/-	++	+	+	+	+++
CDC	++	++	+/-	+	+++	-	-	-	++

METHODS

Antibody resuspension (100 µg/ml)

Note: Ensure you see the lyophilized pellet before resuspension.

- Add 1 ml of sterile water to 100 µg and gently pipette until completely resuspended.

RELATED PRODUCTS

Product	Catalog Code
Anti-β-Gal-hIgG1fut (isotype control)	bgal-mab13
Anti-hCD20-hIgG1	hcd20-mab1
Anti-hCD20-hIgG1NQ	hcd20-mab12
Anti-hCD20-hIgG2	hcd20-mab2
Anti-hCD20-hIgG3	hcd20-mab3
Anti-hCD20-hIgG4	hcd20-mab4
Anti-hCD20-hIgG4 (S228P)	hcd20-mab14

Other antibody isotype families are available, such as Anti-hTNF-α, Anti-hPD1 and Anti-βGal (control). For more information, please visit www.invivogen.com/biosimilar-antibody-isotypes.

TECHNICAL SUPPORT

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