

Anti-hCD20-Of-hIgG1

Human IgG1 monoclonal antibody against human CD20

Catalog code: hcd20of-mab1

<https://www.invivogen.com/anti-hd20of-higg1>

For research use only, not for diagnostic or therapeutic use

Version 18K14-MM

PRODUCT INFORMATION

Contents: 100 µg purified Anti-hCD20-Of-hIgG1 monoclonal antibody (mAb), provided azide-free and lyophilized

Target: Human CD20

Antibody type: Type I (first generation anti-hCD20 mAb)

Source: CHO cells

Isotype: Human IgG1

Light chain type: Kappa

Purity: Protein G purified

Formulation: 0.2 µm filtered solution in 68 mM sodium phosphate buffer (pH 7.4) with 91 mM glycine, 5% w/v saccharose and stabilizing agents

Tested applications: Flow cytometry

Antibody resuspension

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

Storage and stability

- Product is shipped at room temperature. Store lyophilized antibody at -20°C. Lyophilized product is stable for 1 year when stored 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 of Anti-hCD20-Of-hIgG1 to human CD20 has been tested using flow cytometry.
- The complete sequence of this antibody has been verified.
- The absence of bacterial contamination, lipoproteins and endotoxins, has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

ANTIBODY ISOTYPE COLLECTION

For your research, InvivoGen offers an Anti-hCD20-Of (type I mAb) antibody family consisting of 3 different Fc isotypes, either native or engineered (IgG1, IgG4 (S228P), and IgA2). These mAbs vary in their potency to mediate effector functions, such as complement-dependent cytotoxicity (CDC), antibody-dependent cellular cytotoxicity (ADCC) and antibody-dependent cellular phagocytosis (ADCP), as presented in the table below.

Effector function	Native isotypes		Engineered isotypes
	IgG1	IgA2	IgG4 (S228P)
ADCC	++	+	+/-
ADCP	+++	+	+
CDC	++	-	-

DESCRIPTION

Anti-hCD20-Of-hIgG1 mAb features the constant region of the human IgG1 isotype and the variable region of Ofatumumab. The clinically approved antibody, Ofatumumab, is a fully human IgG1 type I (first generation) monoclonal antibody that targets the CD20 antigen found on the surface of malignant and normal B lymphocytes. Binding of Ofatumumab to CD20 results in cell death of B lymphocytes through CDC and ADCC^{1,3}. Ofatumumab has been approved by the FDA for the treatment of chronic lymphocytic leukaemia (CLL).

Human IgG1 is the most abundant immunoglobulin present in serum and binds with high affinity to the Fc receptor on phagocytic cells. The human IgG1 isotype displays high CDC, high ADCC, and very high ADPC.

Anti-hCD20-Of-hIgG1 was generated by recombinant DNA technology. It has been produced in CHO cells and by affinity chromatography with protein G.

As negative controls, InvivoGen provides antibody isotypes targeting *E. coli* β-galactosidase (β-Gal). To help you find the most suitable antibody for your research, InvivoGen also provides another type I (Rituximab) and type II (second generation; Obinutuzumab) anti-hCD20 mAbs (see related products).

1. Baig NA. et al., 2014. Induced resistance to ofatumumab-mediated cell clearance mechanisms, including complement-dependent cytotoxicity, in chronic lymphocytic leukemia. *J Immunol.* 192(4):1620-9. 2. Lin TS., 2010. Ofatumumab: a novel monoclonal anti-CD20 antibody. *Pharmgenomics Pers Med.* 3:51-9. 3. Winiarska M. et al., 2011. Molecular mechanisms of the antitumor effects of anti-CD20 antibodies. *Front Biosci (Landmark Ed).* 16:277-306.

RELATED PRODUCTS

Product	Catalog Code
Anti-β-Gal-hIgG1 (Negative control)	bgal-mab1
Anti-hCD20-Of-hIgG4 (S228P)	hcd20of-mab14
Anti-hCD20-Of-hIgA2	hcd20of-mab7
Anti-hCD20-hIgG1 (Rituximab)	hcd20-mab1
Anti-hCD20-Ga-hIgG1Fut (Obinutuzumab)	hcd20ga-mab13

Isotype collections for other clinically relevant antibodies, such as Anti-hCTLA4 (Ipilimumab), Anti-hPD1 (Nivolumab) and Anti-HER2 (Trastuzumab) are also available.

For more information visit <https://www.invivogen.com/antibody-isotypes>.

TECHNICAL SUPPORT

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