

# Anti-hCD20-Ga-hIgA2

## Human IgA2 monoclonal antibody against human CD20

Catalog code: hcd20ga-mab7

<https://www.invivogen.com/anti-hd20ga-higa2>

For research use only, not for diagnostic or therapeutic use

Version 18K08-MM

### PRODUCT INFORMATION

**Contents:** 100 µg purified Anti-hCD20-Ga-hIgA2 monoclonal antibody (mAb), provided azide-free and lyophilized.

**Target:** Human CD20

**Antibody type:** Type II (second generation anti-hCD20 mAb)

**Source:** CHO cells

**Isotype:** Human IgA2

**Light chain type:** Kappa

**Purity:** Peptide M purified

**Formulation:** 0.2 µm filtered solution 91 mM TRIS buffer 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 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-Ga-hIgA2 to human CD20 (hCD20) 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-Ga (type II mAb) antibody family consisting of 3 different Fc isotypes, either native or engineered (IgG1, IgG1fut, 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	IgG1fut
ADCC	++	+	++++
ADCP	+++	+	+++
CDC	++	-	++

### DESCRIPTION

Anti-hCD20-Ga-hIgA2 mAb features the constant region of the human IgA2 isotype and the variable region of Obinutuzumab. The clinically approved antibody, Obinutuzumab (formerly named afutuzumab or GA101), is a type II (second generation) non-fucosylated, fully humanized IgG1 mAb with improved therapeutic efficacy compared with previously developed type I (first generation) anti-hCD20 mAbs. Obinutuzumab targets the CD20 antigen found on the surface of malignant and normal B lymphocytes. It is a potent inducer of cell death through ADCC and direct-cell death<sup>1,2</sup>. In contrast to type I anti-CD20 antibodies, Obinutuzumab induces little or no CDC<sup>2,3</sup>. The FDA has approved this antibody for the treatment of chronic lymphocytic leukaemia (CLL).

Anti-hCD20-Ga-hIgA2 can be used in comparison with other anti-hCD20 mAbs to assess differences in the effector functions between different isotypes. The IgA2 isotype is found predominantly in mucosal tissues. IgA2 is highly resistant to enzymatic degradation by bacterial proteases, due to a short hinge region. IgA2 displays no CDC, low ADCC and low ADCC.

Anti-hCD20-Ga-hIgA2 was generated by recombinant DNA technology. It has been produced in CHO cells and purified by affinity chromatography with peptide M.

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 type I anti-hCD20 mAbs such as Rituximab and Ofatumumab (see related products).

1. Gagez AL. & Cartron G., 2014. Obinutuzumab: a new class of anti-CD20 monoclonal antibody. *Curr Opin Oncol.* 26(5):484-91.
2. Smolej L., 2014. Targeted treatment for chronic lymphocytic leukemia: clinical potential of Obinutuzumab. *Pharmgenomics Pers Med.* 8:1-7.
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-hIgA2 (Negative control)	bgal-mab7
Anti-hCD20-Ga-hIgG1	hcd20ga-mab1
Anti-hCD20-Ga-hIgG1Fut (Obinutuzumab)	hcd20ga-mab13
Anti-hCD20-Of-hIgG1 (Ofatumumab)	hcd20of-mab1
Anti-hCD20-Of-hIgA2	hcd20of-mab7
Anti-hCD20-hIgG1 (Rituximab)	hcd20-mab1
Anti-hCD20-hIgA2	hcd20-mab7

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

InvivoGen USA (Toll-Free): 888-457-5873

InvivoGen USA (International): +1 (858) 457-5873

InvivoGen Europe: +33 (0) 5-62-71-69-39

InvivoGen Hong Kong: +852 3622-3480

E-mail: [info@invivogen.com](mailto:info@invivogen.com)