Anti-β-Gal-hIgG2

Human IgG2 monoclonal antibody against β-galactosidase; Isotype control

Catalog code: bgal-mab2, bgal-mab2-1

https://www.invivogen.com/anti-beta-gal-higg2

For research use only, not for diagnostic or therapeutic use

Version 23L22-MM

PRODUCT INFORMATION

Contents: Anti-β-Gal-hIgG2 purified monoclonal antibody (mAb) is provided azide-free and lyophilized. It is available in two quantities:

bgal-mab2: 200 µg

bgal-mab2-1: 1 mg

Specificity: Targets cells expressing *E. coli* β-galactosidase (β-Gal)

Clonality: Monoclonal antibody

Isotype: Human IgG2

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

Antibody resuspension

Note: Ensure you see the lyophilized pellet before resuspension.

- Add 1 ml of sterile water to 200 µg to obtain a stock solution at 200 µg/ml.
- Add 1 ml of sterile water to 1 mg to obtain a stock solution at 1 mg/ml.

• Gently pipette until completely resuspended.

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

- Absence of binding of Anti-β-Gal-hIgG2 to human cell lines 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.

DESCRIPTION

Anti-β-Gal-hIgG2 features the constant region of the human IgG2 isotype and the variable region of Mouse IgG2a Control. Mouse IgG2a Control is a mouse IgG2a monoclonal antibody that targets *E. coli* β-galactosidase (β-Gal). This antibody was generated by DNA immunization with a plasmid expressing the β-Gal gene in Swiss mice.

Human IgG2 is the second most common antibody present in serum. Human IgG2 is resistant to cleavage by proteolytic enzymes, due to a short hinge region. Human IgG2 displays low complement-dependent cytotoxicity (CDC) and very low antibody-dependent cell-mediated cytotoxicity (ADCC).

Anti-β-Gal-hIgG2 was generated by recombinant DNA technology. It has been produced in CHO cells and purified by affinity chromatography.

ANTIBODY ISOTYPE FAMILY

For your research, InvivoGen provides an anti-β-Gal isotype family. This family consists of monoclonal antibodies comprising the variable region of a mouse monoclonal antibody targeting *E. coli* β-galactosidase (β-Gal), named mouse IgG2a control, and the constant region of different human isotypes; IgG1, IgG2, and IgA2, plus a human IgG1 with the N298A mutation and a human IgG4 with an engineered hinge region mutation (S228P). 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.

Isotype	Description
Human IgG1	Most abundant IgG present in serum High CDC, high ADCC
Human IgG1 (N298A)	Designed to eliminate binding to human Fcγ receptors No CDC, no ADCC
Human IgG2	Second most common IgG present in serum Low CDC, low ADCC
Human IgG4 (S228P)	Designed to prevent exchange of IgG4 molecules No CDC, low ADCC
Human IgA2	Major class in secretions, oligomeric forms, highly resistant to enzymatic degradation. No CDC, low ADCC

RELATED PRODUCTS

Product	Catalog Code
Anti-β-Gal-hIgG1	bgal-mab1
Anti-β-Gal-hIgG1 (N298A)	bgal-mab12
Mouse IgG2a Control	mabg2a-ctrlm

Several antibody isotype families are available, such as Anti-hCD20, Anti-HER2 and Anti-hPD1. For more information visit www.invivogen.com/biosimilar-antibody-isotypes.

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