

# Anti-β-Gal-mIgG1

Mouse IgG1 monoclonal antibody against β-galactosidase; Isotype control

Catalog # bgal-mab9

For research use only, not for diagnostic or therapeutic use

Version # 16K18-MM

## PRODUCT INFORMATION

**Content:** 200 µg Anti-β-Gal-mIgG1, purified monoclonal antibody, provided azide-free and lyophilized

**Specificity:** *E. coli* β-galactosidase

**Isotype:** Mouse IgG1

**Source:** CHO cells

**Purity:** Purified by affinity chromatography with protein G

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

### Antibody resuspension

Add 2 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 for 1 year when aliquoted and stored at -20 °C. Avoid repeated freeze-thaw cycles.

### Quality control

- Absence of binding of Anti-β-Gal-mIgG1 to mouse 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-mIgG1 features the constant region of the mouse IgG1 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.

Mouse IgG1 is the most abundant immunoglobulin present in serum and binds with high affinity to the Fc receptor on phagocytic cells. The mouse IgG1 isotype displays high antibody-dependent cell-mediated cytotoxicity (ADCC) and complement-dependent cytotoxicity (CDC). Anti-β-Gal-mIgG1 was generated by recombinant DNA technology. It has been produced in CHO cells and purified by affinity chromatography with protein G.

## 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 the mouse IgG1 isotype and of five different human isotypes (IgG1, IgG2, IgG3, IgG4 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
<b>Human &amp; mouse IgG1</b>	Most abundant IgG present in serum High CDC, high ADCC
<b>Human IgG1 (N298A)</b>	Designed to eliminate binding to human Fcγ receptors No CDC, no ADCC
<b>Human IgG2</b>	Second most common IgG present in serum Low CDC, low ADCC
<b>Human IgG3</b>	Third most common IgG present in serum High CDC, high ADCC
<b>Human IgG4</b>	Least common IgG present in serum No CDC, low ADCC
<b>Human IgG4 (S228P)</b>	Designed to prevent exchange of IgG4 molecules No CDC, low ADCC
<b>Human IgA2</b>	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-hIgG2	bgal-mab2
Anti-β-Gal-hIgG3	bgal-mab3
Anti-β-Gal-hIgG4	bgal-mab4
Anti-β-Gal-hIgG4 (S228P)	bgal-mab14
Anti-β-Gal-hIgA2	hbgal-mab7
Mouse IgG2a Control	mabg2a-ctrlm

Other antibody isotype families are available, such as Anti-hCD20, Anti-HER2 and Anti-hPD1. For more information visit [www.invivogen.com/antibody-isotypes](http://www.invivogen.com/antibody-isotypes)

### TECHNICAL SUPPORT

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