

Anti- β -Gal-hIgG1fut

Non-fucosylated human IgG1 monoclonal antibody against β -galactosidase; Isotype control

Catalog code: bgal-mab13, bgal-mab13-1

<https://www.invivogen.com/anti-beta-gal-higg1fut>

For research use only, not for diagnostic or therapeutic use

Version 23L22-MM

PRODUCT INFORMATION

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

bgal-mab13: 200 μ g

bgal-mab13-1: 1 mg

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

Clonality: Monoclonal antibody

Isotype: Human IgG1

Source: CHO cells

Formulation: 0.2 μ m 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 μ g to obtain a stock solution at 200 μ g/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-hIgG1fut 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-hIgG1fut features the constant region of the human 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. Anti- β -Gal-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- β -Gal-hIgG1fut can be used as an isotype control for human IgG1 antibodies.

Anti- β -Gal-hIgG1fut was generated by recombinant DNA technology. It has been produced in CHO cells 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.

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 Fc γ 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-hIgG2	bgal-mab2
Mouse IgG2a Control	mabg2a-ctrl1m

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.

TECHNICAL SUPPORT

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