

# Anti- $\beta$ -Gal-mIgG1e3 InvivoFit™

Mouse IgG1e3 monoclonal antibody against  $\beta$ -galactosidase; Isotype control

Catalog code: bgal-mab15-1, bgal-mab15-10, bgal-mab15-50, bgal-mab15-100

<https://www.invivogen.com/anti-beta-gal-migg1e3>

For research use only

Version 22H18-AK

## PRODUCT INFORMATION

### Contents:

Anti- $\beta$ -Gal-mIgG1e3 InvivoFit™, provided azide-free and lyophilized, is a purified monoclonal antibody (mAb). It is available in three pack sizes:

- 1 mg
- 10 mg
- 50 mg (5 x 10 mg)
- 100 mg (10 x 10 mg)

**Target:** *E. coli*  $\beta$ -galactosidase ( $\beta$ -Gal)

**Species reactivity:** Does not react with murine proteins

**Source:** Chinese hamster ovary (CHO) cells

**Sequence:** ~100% murine (constant region and variable region)

**Isotype:** Murine IgG1e3 (D265A mutation; no effector function)

**Light chain type:** Kappa

**Purification:** By affinity chromatography with protein A

**Formulation:** 0.2  $\mu$ m filtered solution in 150 mM sodium chloride, 20 mM sodium phosphate buffer with 5% saccharose

**Administration:** Suitable for parenteral delivery in mice

**Tested applications:** Flow cytometry and ELISA

### Antibody resuspension

*Note:* Ensure you see the lyophilized pellet before resuspension.

Add 500  $\mu$ l of sterile water to 1 mg of Anti- $\beta$ -Gal-mIgG1e3 InvivoFit™ to obtain a concentration of 2 mg/ml.

### Storage and stability

- Product is shipped at room temperature. Store lyophilized antibody at -20°C. Lyophilized product is stable for at least 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

- Functionality of Anti- $\beta$ -Gal-mIgG1e3 InvivoFit™ has been tested using flow cytometry and ELISA.
- The complete sequence of this antibody has been verified.
- <5% aggregates (confirmed by size exclusion chromatography).
- Anti- $\beta$ -Gal-mIgG1e3 InvivoFit™ is filter-sterilized (0.2  $\mu$ m) and its endotoxin level is <1 EU/mg of the protein (determined by the LAL assay).

## MOUSE ANTI-MOUSE MABS

InvivoGen offers a collection of InvivoFit™ recombinant mouse anti-mouse mAbs specifically adapted for *in vivo* studies. This collection includes mAbs targeting immune checkpoints such as PD-1. For more information visit [www.invivogen.com/mouse-anti-mouse-mabs](https://www.invivogen.com/mouse-anti-mouse-mabs).

For your research, InvivoGen provides anti- $\beta$ -Gal isotype controls, comprising the variable region of a mouse monoclonal antibody targeting  $\beta$ -Gal and the constant region of either the engineered mouse IgG1e3 isotype or the native mouse IgG1 and IgG2a isotype. These isotypes differ in their effector functions, such as antibody-dependent cellular cytotoxicity (ADCC), antibody-dependent cell phagocytosis (ADCP), and complement-dependent cytotoxicity (CDC) as presented in the table below.

Effector function	mIgG1	mIgG1e3	mIgG2a
ADCC	+/-	-	++
ADCP	+	-	+++
CDC	-	-	++

## DESCRIPTION

Anti- $\beta$ -Gal-mIgG1e3 InvivoFit™ is a recombinant mAb comprising the variable region of the hybridoma-derived mAb Mouse IgG2a Control (clone: T9C6) that targets *E. coli*  $\beta$ -galactosidase ( $\beta$ -Gal). This mAb does not react with murine proteins. It features the engineered murine IgG1e3 that contains a point mutation D265A (a replacement of aspartic acid by alanine at position 265), resulting in the complete loss of cytolytic effector functions (ADCC, ADCP, and CDC)<sup>1,2</sup>. Anti- $\beta$ -Gal-mIgG1e3 InvivoFit™ is provided as an isotype control for use with InvivoGen's IgG1e3 antibodies in the mouse anti-mouse mAbs collection (see below). It has been produced in CHO cells and purified by affinity chromatography with protein A.

## RELATED PRODUCTS

Product	Cat.Code
Anti- $\beta$ -Gal-mIgG1e3	bgal-mab15-02
Anti-mPD-1-mIgG1e3 InvivoFit™	mpd1-mab15-1
Anti-PD-L1-mIgG1e3 InvivoFit™	pd11-mab15-1

1. Yamazaki T. *et al.*, 2005. Blockade of B7-H1 on macrophages suppresses CD4+ T cell proliferation by augmenting IFN-gamma-induced nitric oxide production. *J Immunol.* 175(3):1586-92. 2. Baudino L. *et al.*, 2008. Crucial role of aspartic acid at position 265 in the CH2 domain for murine IgG2a and IgG2b Fc-associated effector functions. *J Immunol.* 181(9):6664-9.

### TECHNICAL SUPPORT

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