Anti-mPD-1-mIgG1e3 (4C11) InvivoFit™

4C11-derived recombinant mouse monoclonal antibody against murine PD-1

Catalog code: mpd1c2-mab15-1, mpd1c2-mab15-10, mpd1c2-mab15-50

https://www.invivogen.com/recombinant-anti-mouse-pd1-4C11-igg1-d265a

For research use only

Version 25C31-AK

PRODUCT INFORMATION

Contents:

Anti-mPD-1-mIgG1e3 (4C11) InvivoFit™, purified monoclonal antibody (mAb), provided azide-free and lyophilized. It is available in three pack sizes:

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

Target: Mouse programmed cell death 1 (mPD-1)
Clone: 4C11
Source: Chinese hamster ovary (CHO) cells
Sequence: 100% murine (constant region and variable region)
Isotype: Murine IgG1e3
Light chain type: Kappa
Purification: Affinity chromatography with protein A
Formulation: 0.2 µm filtered solution in 150 mM sodium chloride, 20 mM sodium phosphate buffer with 5% saccharose
Administration: Suitable for parenteral delivery in mice
Tested applications: *in vivo* studies, flow cytometry

Antibody resuspension (2 mg/ml)

Note: Ensure you see the lyophilized pellet before resuspension.

Resuspend Anti-mPD-1-mIgG1e3 (4C11) InvivoFit™ with sterile water:

- Add 500 µl to 1 mg
- Add 5 ml to 10 mg

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 at 4 °C and for 1 year at -20 °C. Avoid repeated freeze-thaw cycles.

Quality control

- Binding of Anti-mPD-1-mIgG1e3 (4C11) InvivoFit™ to mPD-1 has been confirmed using flow cytometry.
- The complete sequence of this antibody has been verified.
- <5% aggregates (confirmed by size exclusion chromatography).
- Anti-mPD1-mIgG1e3 InvivoFit™ is filter-sterilized (0.2 µm) and its endotoxin level is <1 EU/mg (determined by the LAL assay).

BACKGROUND

Programmed cell death 1 (PD-1; also known as CD279) is a type I transmembrane protein expressed at the cell surface of activated and exhausted conventional T cells[1]. PD-1 is an inhibitory immune checkpoint that prevents T-cell overstimulation and host damage. PD-1 interaction with its ligands PD-L1 (programmed cell death ligand 1) or PD-L2 induces inhibition of T-cell receptor signaling[1]. Blockade of PD-1 with mAbs has allowed unprecedented remissions in patients with metastatic melanoma or non-small cell lung cancer[1].

DESCRIPTION

Anti-mPD-1-mIgG1e3 (4C11) InvivoFit™ is a recombinant mAb designed for *in vivo* studies in mice. Its sequence is 100% murine, as the original clone 4C11 was raised in PD-1 knockout mice using a proprietary method, designed to overcome the limitation of using xenogeneic mAbs *in vivo*.

The well-known RMP1-14 mAb, along with other commercially available anti-mPD-1 mAbs, were generated in rats, and are therefore immunogenic in mice, upon repeated administrations. Additionally, these mAbs feature the IgG2a isotype which promotes antibody-dependent cellular cytotoxicity. To overcome these two issues, InvivoGen offers a mouse anti-mouse mAb (non-immunogenic) featuring an isotype devoid of effector function. Anti-mPD-1-mIgG1e3 (4C11) InvivoFit™ was generated by recombinant DNA technology and with a point mutation D265A (a replacement of aspartic acid by alanine at position 265), resulting in the complete loss of cytolytic effector function[2,3]. Anti-mPD-1-mIgG1e3 InvivoFit™ is thus ideal for blocking the mPD-1 receptor without causing T cell depletion. This antibody is produced in CHO cells and purified by affinity chromatography with protein A.

nvivoGen provides a 4C11-derived fully mouse mAb with an native mIgG1 constant region (cat. code: mpd1c2-mab9-1).

1. Ribas A. & Wolchock J.D., 2018. Cancer immunotherapy using checkpoint blockade. Science. 359:1350-55. **2. Yamazaki T. et al., 2005.** Blockade of B7-H1 on macrophages suppresses CD4+ T cell proliferation by augmenting IFN-gammainduced nitric oxide production. J Immunol. 175(3):1586-92. **3. 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

RELATED PRODUCTS

Product	Catalog Code
Anti-mPD-1-mIgG1 (4C11)	mpd1c2-mab9-1
Anti-mPD-1-mIgG1e3 (RMP1-14)	mpd1-mab15-1
Anti-mPD-L1-mIgG1e3 (10F.9G2)	mpdl1c2-mab15-1
Anti-β-Gal-mIgG1e3 InvivoFit™	bgal-mab15-1

Other antibody isotype families are available, such as Anti-hPD-1 and Anti-HER2. For more information visit https://www.invivogen.com/antibody-isotypes.

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