Anti-hPD-L1-hIgG1

Recombinant monoclonal human IgG1 antibody against human PD-L1

Catalog code: hpdl1-mab1, hpdl1-mab1-03

https://www.invivogen.com/anti-human-pdl1-igg1-atezolizumab

For research use only, not for diagnostic or therapeutic use

Version 23L18-MM

PRODUCT INFORMATION

Contents: Anti-hPD-L1-hIgG1 purified monoclonal antibody (mAb) is provided azide-free and lyophilized. It is available in two quantities:

hpdl1-mab1: 100 µg Anti-hPD-L1-hIgG1

hpdl1-mab1-03: 3 x 100 µg Anti-hPD-L1-hIgG1

Target: Human Programmed death-ligand 1

Species reactivity: Human and mouse

Source: CHO cells

Isotype: Human IgG1

Light chain type: Kappa

Clonality: Monoclonal

Purification: By affinity chromatography with protein G

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

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

- Binding of Anti-hPD-L1-hIgG1 to surface expressed human PD-L1 on target cells has been validated using flow cytometry.
- Absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and TLR4 cellular assays.

PRODUCT DESCRIPTION

Anti-hPD-L1-hIgG1 is a recombinant monoclonal antibody (mAb) featuring a fully sequenced variable region equivalent to Atezolizumab, that recognizes human (h)PD-L1, and the constant region of the human (h)IgG1 isotype. Anti-hPD-L1-hIgG1 was generated by recombinant DNA technology, produced in CHO cells, and purified by affinity chromatography with protein G.

PD-L1 background

Programmed cell death ligand 1 (PD-L1), also known as cluster of differentiation 274 (CD274) or B7 homolog 1 (B7-H1) is a transmembrane protein that can be constitutively expressed or induced in myeloid, lymphoid, and normal epithelial cells, as well as in cancer[1, 2]. PD-L1 is the principle ligand for programmed cell death protein 1 (PD-1). This interaction is essential in the development of immune tolerance preventing excessive immune cell activity. However, PD-L1 expression is an immune evasion mechanism exploited by various malignancies[3]. Specifically, over-expressed PD-L1 on tumor cells and tumor infiltrating immune cells, such as macrophages, is able to bind to PD-1 on cytotoxic T cells, and ultimately inhibit the anti-tumor T cell response[2, 4]. Thus, there are numerous PD-L1 inhibitors in development as promising immuno-oncology therapies. Notably, Atezolizumab (also known as MPDL3280A), a fully humanized IgG1 (N298A) mAb that blocks the interaction of PD-L1 with PD-1 and induces anti-tumor immune reactivation, has been approved by the FDA for combinational use in the treatment of lung and breast cancer[2, 5].

IgG1 isotype effector function

Human IgG1 binds with high affinity to the Fc receptor on phagocytic cells. Therefore, Anti-hPD-L1-hIgG1 displays high effector function, including antibody-dependent cell-mediated cytotoxicity (ADCC) and complement-dependent cytotoxicity (CDC).

1. Juneja V.R. *et al.* 2017. PD-L1 on tumor cells is sufficient for immune evasion in immunogenic tumors and inhibits CD8 T cell cytotoxicity. J Exp Med 214, 895-904. **2. Kythreotou A. *et al.* 2018.** PD-L1. J Clin Pathol 71, 189-194. **3. Sun C. *et al.* 2018.** Regulation and Function of the PD-L1 Checkpoint. Immunity 48, 434-452. **4. Lau J. *et al.* 2017.** Tumour and host cell PD-L1 is required to mediate suppression of anti-tumour immunity in mice. Nat Commun 8, 14572. **5. Heimes A.S. & Schmidt M. 2019.** Atezolizumab for the treatment of triple-negative breast cancer. Expert Opin Investig Drugs 28, 1-5.

METHODS

Anti-hPD-L1-hIgG1 resuspension (100 µg/ml)

Note: Ensure you see the lyophilized pellet before resuspension.

- Add 1 ml of sterile water to 100 µg and gently pipette until completely resuspended.
- Prepare aliquots and store at -20 °C until required.

ANTIBODY ISOTYPE COLLECTION

For your research, InvivoGen provides an Anti-hPD-L1 isotype family. This isotype family consists of mAbs comprising a variable region equivalent to Atezolizumab and differing constant regions of both natural and engineered human isotypes *(see related products)*. The isotypes differ in their functional and effector functions, such as antibody-dependent cell-mediated cytotoxicity (ADCC) and complement dependent cytotoxicity (CDC).

***Disclaimer:** The terms "Atezolizumab" and "MPDL3280A" are only used as references. Anti-hPD-L1-hIgG1 is not a pharmaceutical biosimilar of Atezolizumab. It has not been developed nor approved by Atezolizumab owner(s), and is not intended for any therapeutic or diagnostic use in human or animal.*

RELATED PRODUCTS

Product	Catalog Code
Anti-hPD-L1-hIgG1 (N298A)	hpdl1-mab12
Anti-hPD-L1-hIgG1fut	hpdl1-mab13
Raji-hPD-L1 Cells	raji-hpdl1

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