Anti-Human PD-L1 (CD274) (Durvalumab)

IVMB0539

Product Information

Product SKU:	IVMB0539	**Clone**:	MEDI4736	**Target**:	PD-L1
Size:	500 µg			**Isotype**:	Human IgG1κ

Additional Information

Reactivity:	Human	**Host Species**:	Human
Antibody Type:	Biosimilar Recombinant Human Monoclonal Antibody	**Expression Host**:	HEK-293 Cells

Immunogen Information

Background:

Programmed cell death 1 ligand 1 (PD-L1; CD274; B7-H1) is a type I transmembrane glycoprotein widely expressed in many types of tissues that acts as a ligand for the immune inhibitory receptor programmed cell death 1 (PD-1; CD279) [1,2,3] and B7.1 [4]. The PD-1 pathway is responsible for T cell activation, proliferation, and cytotoxic secretion, with PD-1/PD-L1 interaction triggering inhibitory signals that dampen T cell function. PD-L1 also plays a critical role in the differentiation of inducible regulatory T cells [5].

In normal tissues, PD-L1/PD-1 ligation is crucial to maintaining homeostasis of the immune system and preventing autoimmunity during infection and inflammation [5]. In the tumor microenvironment, their interaction provides an immune escape mechanism for tumor cells by turning off cytotoxic T cells. As such, blocking the PD-L1/PD-1 interaction is a target of many anti-cancer immunotherapies.

Durvalumab was generated using IgG2 and IgG4 XenoMouse animals immunized with human PD-L1-Ig or CHO cells expressing human PD-L1 [6]. Hybridomas were screened for binding to human PD-L1-transfected HEK 293 cells and inhibition of PD-1 binding to PD-L1 expressing CHO cells. To avoid triggering antibody-dependent cellular cytotoxicity and complement-dependent cytotoxicity, the constant domain was then exchanged for a human

IgG1 triple-mutant domain that reduces binding to C1q and Fc gamma receptors. Durvalumab binds specifically to PD-L1 and inhibits interaction with PD-1 and CD80. Durvalumab does not cross react with human PD-L2, B7-H3, or mouse PD-L1. Durvalumab has been investigated as an anti-tumor immunotherapeutic agent in various clinical trials and yields significant improvement in progression-free survival [7,8,9,10].

Endotoxin Level: < 1.0 EU/mg as determined by the LAL method

Applications: ELISA

Synonyms: Durvalumab, PD-L1, B7-H1

Antigen Distribution: PD-L1 is commonly expressed on the surface of antigen-presenting cells (macrophages, activated B cells, dendritic cells), some epithelial cells under inflammatory conditions, some activated T cells, and several types of tumors as well as tumor-infiltrating immune cells. PD-L1 can also exist in a soluble form (sPD-L1) in myeloid-derived cells (monocytes, macrophages, and dendritic cells) and several human cancer lines.

Immunogen: Human PD-L1

Formulation: This biosimilar antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Specificity: Durvalumab activity is directed against human PD-L1.

Recommended Isotype Controls: Human IgG1

Storage & Handling: Functional grade biosimilar antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at -80°C. Avoid Repeated Freeze Thaw Cycles.

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