

IVMB0541

Product Information

Product SKU: IVMB0541	Clone: MSB0010718C	Target: PD-L1
Size: 500 µg		Isotype: Human IgG1 L1

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 B7.1⁴. 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 cells⁵.

In normal tissues, PD-L1/PD-1 ligation is crucial to maintaining homeostasis of the immune system and preventing autoimmunity during infection and inflammation⁵. 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.

Avelumab is a human IgG1 lambda monoclonal antibody that blocks the interaction between PD-L1 and its receptors PD-1 and B7.1, thereby enabling T cell activation and restoration of the adaptive immune response⁴. Avelumab can lyse a range of human tumor cells in the presence of peripheral blood mononuclear cells or natural killer cells^{6, 7}. Avelumab engages both adaptive and innate immune functions and mediates antibody-dependent cell-mediated cytotoxicity by retaining a native Fc region^{6, 7}. Avelumab binds to

a functional epitope comprising residues Y56, D61, E58, E60, Q66, R113 and M115 as well as a conformational epitope comprising residues 54-66 and 12-122 of human PD-L1⁸.

Endotoxin Level:	< 1.0 EU/mg as determined by the LAL method
Applications:	ELISA
Synonyms:	Avelumab, PD-L1
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:	Avelumab blocks PD-L1 ligand from interacting with its receptors PD-1 and B7.1.
Product Preparation:	Recombinant biosimilar antibodies are manufactured in an animal free facility using only in vitro protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.
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.