Anti-Human PD-1 (Sintilimab)

IVMB0535

Product Information

Product SKU:	IVMB0535	**Clone**:	IBI308	**Target**:	PD-1
Size:	500 µg			**Isotype**:	Human IgG4κ

Additional Information

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

Immunogen Information

Background:

PD-1 is a transmembrane protein in the CD28/CTLA-4 subfamily of the Ig superfamily [1,2]. When stimulated via the T cell receptor (TCR), Tregs translocate PD-1 to the cell surface [3]. Programmed cell death 1 ligand 1 (PD-L1; CD274; B7H1) and programmed cell death 1 ligand 2 (PD-L2; CD273; B7DC) have been identified as PD-1 ligands [1]. PD-1 is co-expressed with PD-L1 on tumor cells and tumor-infiltrating antigen-presenting cells (APCs) [2]. Additionally, PD-1 is co-expressed with IL2RA on activated CD4+ T cells [3].

PD-1 is an immune checkpoint receptor that suppresses cancer-specific immune responses [4]. Additionally, PD-1 acts as a T cell inhibitory receptor and plays a critical role in peripheral tolerance induction and autoimmune disease prevention as well as important roles in the survival of dendritic cells, macrophage phagocytosis, and tumor cell glycolysis [2]. PD-1 prevents uncontrolled T cell activity, leading to attenuation of T cell proliferation, cytokine production, and cytolytic activities. Additionally, the PD-1 pathway is a major mechanism of tumor immune evasion, and, as such, PD-1 is a target of cancer immunotherapy [2].

Sintilimab is a fully human monoclonal antibody that helps restore the endogenous antitumor T cell response by binding to PD-1 on activated T cells and blocking PD-1 from interacting with PD-L1 and PD-L2 [5]. Sintilimab's interaction with PD-1 depends on the

hydrophobic and aromatic amino acid residues in its complementarity-determining region [6]. Sintilimab rapidly occupies PD-1 receptors on the surface of CD3+ T cells in peripheral blood and relies on antibody-dependent cell cytotoxicity as its mechanism of action [5]. Sintilimab is also known as IBI-308 and its chemical name is anti-(human programmed cell death protein 1) (human monoclonal IBI308 gamma4-chain), disulphide with human monoclonal IBI308 kappa-chain, dimer. Sintilimab was generated by yeast display technology [7].

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

Applications: ELISA

Synonyms: Anti-PD-1, PDCD1, CD279

Antigen Distribution: PD-1 is expressed on activated T cells, B cells, a subset of thymocytes, macrophages, dendritic cells, and some tumor cells and is also retained in the intracellular compartments of regulatory T cells (Tregs).

Immunogen: Human PD-1

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: Sintilimab activity is directed against human and cynomolgus PD-1.

Recommended Isotype Controls: Human IgG4

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.