

IVMB0536

Product Information

Product SKU: IVMB0536	Clone: GB226	Target: PD-1
Size: 100 mg, 50 mg, 25 mg, 5 mg, 1 mg		Isotype: Human IgG4k

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.

Genolimzumab is a humanized IgG4 monoclonal antibody that targets PD-1 and prevents binding to PD-L1 and PD-L2 ligands, allowing T cell activation and tumor cell death ^{5,6}. Genolimzumab has very low antibody-dependent cell mediated cytotoxicity and

complement-dependent cytotoxicity ⁵. Genolimzumab does not completely block nivolumab or pembrolizumab binding to PD-1, suggesting the use of a novel binding epitope ⁶. Anti-tumor activity has been demonstrated in various clinical trials⁵.

Endotoxin Level:	< 1.0 EU/mg as determined by the LAL method
Applications:	ELISA
Synonyms:	CD279, PD1, Anti-PD1, PDCD1
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:	Genolimzumab activity is directed against human and cynomolgus PD-1.
Recommended Isotype	Human IgG4
Controls:	
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.