

## IVMB0209

### Product Information

<b>Product SKU:</b>	IVMB0209	<b>Clone:</b>	5C4.B8	<b>Target:</b>	PD-1
<b>Size:</b>	1.0 mg, 100 mg, 25 mg, 5.0 mg, 50 mg			<b>Isotype:</b>	Human IgG1κ

### Additional Information

<b>Reactivity:</b>	Human/Cynomolgus Monkey	<b>Host Species:</b>	Human
<b>Antibody Type:</b>	Biosimilar Recombinant Human Monoclonal Antibody	<b>Expression Host:</b>	HEK-293 Cells

### Immunogen Information

**Background:** Programmed cell death protein 1 (PD-1) is a protein on the surface of cells that plays a role in the maintenance of self-tolerance. PD-1 promotes self-tolerance via the down-regulation of the immune system which results in the suppression of T cell inflammatory activity. PD-L1 and PD-L2 are the two ligands known to bind PD-1. PD-L1 has increased expression in several cancers.<sup>1</sup> PD-L2 has a more limited expression and is primarily expressed by dendritic cells and only some tumor lines. Inhibition of the interaction of PD-1 with its ligands can function as an immune checkpoint blockade through the improvement of In vitro T-cell responses and via the mediation of anti-tumor activity.<sup>2</sup> Nivolumab disrupts the negative signal that is responsible for T-cell activation and proliferation by binding to PD-1 on activated immune cells to selectively block the interaction of the PD-1 receptor with its ligands.<sup>3</sup> Emerging research suggests that combined blockade of PD-1 and CTLA-4, with nivolumab and ipilimumab respectively, could produce greater antitumor activity than blockade of either pathway alone.<sup>4</sup> This cost-effective, research-grade Anti-Human CD279 (PD-1) (Nivolumab) utilizes the same variable regions from the therapeutic antibody Nivolumab making it ideal for research projects.

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

**Applications:** B

**Synonyms:** PD1; PD-1; CD279; SLEB2; hPD-1; hPD-1; hSLE1

<b>Antigen Distribution:</b>	PD-1 is expressed on a subset of CD4-CD8- thymocytes, and on activated T and B cells.
<b>Immunogen:</b>	Human PD-1
<b>Formulation:</b>	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.
<b>Specificity:</b>	This non-therapeutic biosimilar antibody uses the same variable region sequence as the therapeutic antibody Nivolumab. Clone 5C4.B8 binds to the extracellular portion of Human/Cynomolgus PD-1 and does not bind to other IgG superfamily proteins. This product is for research use only.
<b>Product Preparation:</b>	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.
<b>Storage &amp; Handling:</b>	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.