

Product Datasheet

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Anti-Human CD279 (PD-1) (Nivolumab) [Clone 5C4.B8] — PE

Biosimilar Recombinant Human Monoclonal Antibody

Product Information

Product No.:	LT1204
Clone:	5C4.B8
RRID:	AB_2893895
Isotype:	Human Human IgG1κ
Storage:	Sterile 2-8°C

Product Description

Specificity:

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.

Antigen Distribution:

PD-1 is expressed on a subset of CD4-CD8- thymocytes, and on activated T and B cells.

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.¹ 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.² 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.³ 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.⁴ 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.

Known Reactivity Species:

Cynomolgus Monkey, Human

Expression Host:

HEK-293 Cells

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Format:

R-phycoerythrin (PE)

Immunogen:

Human PD-1

Formulation

This R-phycoerythrin (R-PE) conjugate is formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.4, 1% BSA and 0.09% sodium azide as a preservative.

Storage and Stability

This R-phycoerythrin (R-PE) conjugate is stable when stored at 2-8°C. **Do not freeze.**

Applications

Applications and Recommended Usage (Quality Tested By Leinco):

FC The suggested concentration for Nivolumab biosimilar antibody for staining cells in flow cytometry is $\leq 1.0 \mu\text{g}$ per 10^6 cells in a volume of 100 μl . Titration of the reagent is recommended for optimal performance for each application.

Other Applications Reported in Literature:

IHC

FA

Country of Origin

USA

References

1. Minato, N. *et al.* (2002) *Proc Natl Acad Sci U S A.* **99**(19): 12293–97.
2. Korman, AJ. *et al.* (2014) *Cancer Immunol Res.* **2**(9):846-56.
3. Li, Y. *et al.* (2016) *MAbs.* **8**(5):951-60.
4. Wolchok, JD. *et al.* (2013) *N Engl J Med* **369**(2):122-33.



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