

Human PD-1

Recombinant Protein

Product Information

Product No.: P613**Storage:** -20°C to -80°C

Product Description

Background:

Human Programmed Death 1 (PD-1) is a receptor located on the surface of various cell types including T-cells, B-cells, and some myeloid cells ¹. Its primary function involves regulating the immune system by inhibiting T-cell activation. This process is crucial for promoting self-tolerance and minimizing autoimmune reactions. PD-1 interacts with its ligands, PD-L1 and PD-L2, to effectively suppress T-cell activation and the production of cytokines. This mechanism is frequently exploited by cancers as a means to evade the immune response ^{2, 3}.

The interaction between PD-1 and PD-L1 has become a focus in cancer immunotherapy ⁴. Promising advancements have been made by blocking antibodies targeting PD-1, such as nivolumab and pembrolizumab. These antibodies have shown benefits in treating various cancer types such as melanoma, non-small cell lung cancer, and renal cell carcinoma. They achieve this by enhancing T cell function within the tumor microenvironment ^{5 - 7}. These treatments demonstrate how understanding the role of PD-1, in T-cell activity can lead to the development of immunotherapeutic strategies.

Expression Host:

HEK-293 Cells

Format:

Purified No Carrier Protein

Storage and Stability

1 month, 2 to 8 °C under sterile conditions after opening and reconstituting.

1 year from date of receipt, -20 to -80 °C as supplied. 3 months from date of receipt, -20 to -80 °C sterile conditions after opening and reconstituting.

Applications

Applications and Recommended Usage (Quality Tested By Leinco):WB,
ELISA,
FA

Country of Origin

USA

References

1. Kythreotou A, Siddique A, Mauri FA, Bower M, Pinato DJ. J Clin Pathol. 2018;71(3):189-194.
2. Jiang Y, Chen M, Nie H, Yuan Y. Human Vaccines & Immunotherapeutics. 2019;15(5):1111-1122.
3. Blank C, Gajewski TF, Mackensen A. Cancer Immunol Immunother. 2005;54(4):307-314.
4. Dong Y, Sun Q, Zhang X. Oncotarget. 2017;8(2):2171-2186.
5. Homet Moreno B, Parisi G, Robert L, Ribas A. Semin Oncol. 2015;42(3):466-473.
6. Ohaegbulam KC, Assal A, Lazar-Molnar E, Yao Y, Zang X. Trends Mol Med. 2015;21(1):24-33.
7. McDermott J, Jimeno A. Drugs Today (Barc). 2015;51(1):7-20.