

Nivolumab

Cat. No.:	HY-P9903
CAS No.:	946414-94-4
Molecular Weight:	143599.09
Target:	PD-1/PD-L1
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Nivolumab is a programmed death receptor-1 (PD-1) blocking human IgG4 antibody to treat advanced (metastatic) non-small cell lung cancer.
In Vitro	Nivolumab binds to CHO cells expressing PD-1 with an EC ₅₀ of 1.66 nM, but does not bind to the parental CHO cell line. Nivolumab binds to PD-1 on activated T cells with an EC ₅₀ of 0.64 nM. Nivolumab also inhibits the interaction between PD-1 and its ligands, PD-L1 and PD-L2, with IC ₅₀ values of 2.52 and 2.59 nM, respectively. Nivolumab (1.5 ng/mL) can enhance T-cell reactivity in the presence of a T-cell receptor stimulus ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Nivolumab (10 and 50 mg/kg, i.v.) is well tolerated in cynomolgus monkeys. Serum chemistry changes are limited to a reversible 28% decrease in T3 at week 13 in females treated with 50 mg/kg. T4 and TSH levels are unchanged. In males treated with 50 mg/kg, there are no changes in T3, T4, or TSH levels. Nivolumab exposure increases in an approximately dose-proportional manner between 10 and 50 mg/kg, with no substantial sex differences noted ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Biosens Bioelectron. 1 July 2022, 114166.
- Mol Ther. 2021 Sep 18;S1525-0016(21)00468-8.
- J Immunother Cancer. 2023 Feb;11(2):e005126.
- Vaccines. 2023, 11(2), 286.
- Cell Mol Gastroenterol Hepatol. 2021 Mar 2;S2352-345X(21)00043-6.

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REFERENCES

[1]. Wang C, et al. In vitro characterization of the anti-PD-1 antibody nivolumab, BMS-936558, and in vivo toxicology in non-human primates. Cancer Immunol Res. 2014

Caution: Product has not been fully validated for medical applications. For research use only.

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