

Anti-PD-1 (Nivolumab), Humanized Antibody
Human Monoclonal Antibody
Catalog # ABV12038**Specification**

Anti-PD-1 (Nivolumab), Humanized Antibody - Product Information

Application	E
Primary Accession	Q02242
Reactivity	Human
Host	Human
Clonality	Monoclonal
Isotype	Human IgG4

Anti-PD-1 (Nivolumab), Humanized Antibody - Additional Information**Gene ID** 18566**Other Names**

Opdivo, PD-1

Target/Specificity

PD-1

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

In phosphate buffered saline, pH 7.6

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

Anti-PD-1 (Nivolumab), Humanized Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-PD-1 (Nivolumab), Humanized Antibody - Protein Information**Name** Pdcd1 {ECO:0000312|MGI:MGI:104879}

Function

Inhibitory receptor on antigen activated T-cells that plays a critical role in induction and maintenance of immune tolerance to self (PubMed:10485649, PubMed:11698646, PubMed:11209085, PubMed:21300912). Delivers inhibitory signals upon binding to ligands, such as CD274/PDCD1L1 and CD273/PDCD1LG2 (PubMed:11015443, PubMed:11224527, PubMed:22641383, PubMed:18287011, PubMed:18641123). Following T-cell receptor (TCR) engagement, PDCD1 associates with CD3-TCR in the immunological synapse and directly inhibits T-cell activation (PubMed:22641383). Suppresses T-cell activation through the recruitment of PTPN11/SHP-2: following ligand-binding, PDCD1 is phosphorylated within the ITSM motif, leading to the recruitment of the protein tyrosine phosphatase PTPN11/SHP-2 that mediates dephosphorylation of key TCR proximal signaling molecules, such as ZAP70, PRKCQ/PKCtheta and CD247/CD3zeta (PubMed:11698646, PubMed:22641383). The PDCD1-mediated inhibitory pathway is exploited by tumors to attenuate anti-tumor immunity and facilitate tumor survival (By similarity).

Cellular Location

Cell membrane; Single-pass type I membrane protein

Tissue Location

Thymus-specific..

Anti-PD-1 (Nivolumab), Humanized Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-PD-1 (Nivolumab), Humanized Antibody - Images

Anti-PD-1 (Nivolumab), Humanized Antibody - Background

Nivolumab, trade name Opdivo, is a medication used to treat cancer. It is used as a first line treatment for inoperable or metastatic melanoma in combination with ipilimumab if the cancer does not have a mutation in BRAF, as a second-line treatment following treatment with ipilimumab and if the cancer has a mutation in BRAF, with a BRAF inhibitor, as a second-line treatment for squamous non-small cell lung cancer, and as a second-line treatment for renal cell carcinoma.