

PD-1 Antibody | anti-PD-1 antibody

Anti-PD-1 [5C4.B8 (Nivolumab)]

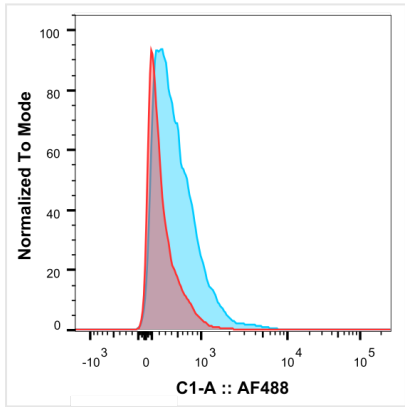
CATALOG # AAA72300	REACTIVITY Human, Cynomolgus	APPLICATIONS Flow Cytometry, Functional Assay, Immunohistochemistry
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PRODUCT SYNONYMS

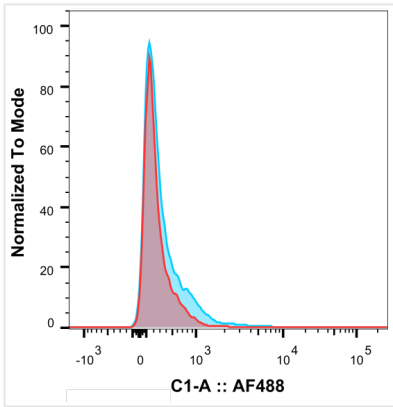
PD-1; Anti-PD-1 [5C4.B8 (Nivolumab)]; CD279; programmed death-1; programmed death 1 ; PD1; PD 1; Programmed cell death protein 1; hPD-1; hPD1; hPD 1; BMS-936558; MDX-1106;ONO-4538; anti-PD-1 antibody

PRODUCT SPECIFICATIONS

Reactivity	Human, Cynomolgus
Isotype	Rabbit IgG kappa
Clone Number	5C4.B8 (Nivolumab)
Specificity	Nivolumab binds to the extracellular portion of human PD-1 (2.6 nM - Scatchard analysis and SPR) - the antibody also binds to cynomolgus PD-1 with a similar affinity (3.9 nM - SPR). The antibody does not bind to other immunoglobulin superfamily proteins such as CD28, CTLA-4, ICOS and BTLA. The epitope of Nivolumab for both human and cynomolgus PD-1 includes the sequences SFVLNWYR-MSPSNQTDKLAAPEDR (aa 29-53) and SGTYLCGAISLAPKAQIKE (aa 85-103), as shown by mass spectrometry of protease-treated fragments of PD-1 - these residues are thought to additionally be important for liand binding to PD-1. PD-1 is an inhibitory receptor expressed on the surface of T cells. It is able to bind to its ligands PDL-1 and PDL-2 which results in an inhibitory signal leading to decreased T cell proliferation, cytokine protuction and cytotoxic activitiy. PDL-1 is often expressed in human tumors such as melanoma, lung and kidney where it is able to overactivate PD-1 and plays a role in the evasion of cancer cells from the immune system.
Purity/Purification	Purified. Protein A affinity purified
Form/Format	PBS with 0.02% Proclin 300.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-PD-1 antibody	Blocking, SPR (Surface Plasmon Resonance), FCM/FACS (Flow Cytometry), IHC (Immunohistochemistry)
Preparation and Storage	Store at 4 degree C for up to 3 months. For longer storage, aliquot and store at -20 degree C.



FCM/FACS (Flow Cytometry)
Flow-cytometry using anti-PD-1 antibody Nivolumab Cynomolgus monkey lymphocytes were stained with an isotype control or the rabbit-chimeric version of Nivolumab (AAA72300, blue) at a concentration of 1 ug/ml for 30 mins at RT. After washing, bound antibody was detected using a AF488 conjugated donkey anti-rabbit antibody (ab150073) and cells analysed on a FlowJo single-cell flow cytometer.



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ADDITIONAL INFORMATION

Related Product Information for anti-PD-1 antibody	mAb PD1.5 was prepared by immunizing IgH and IgK knock-out transgenic mice possessing a human immunoglobulin (heavy chain) minilocus with recombinant human PD-1-Fc protein consisting of the extracellular domain of PD-1 (amino acids 1-167) and the Fc portion of human IgG1, and Chinese hamster ovary (CHO) cells expressing human PD-1. Nivolumab was generated by grafting the variable regions of PD1.5 onto human kappa and IgG4 constant regions containing an S228P mutation (prevents Fab arm exchange with endogenous IgG4 antibodies). Describes the generation and characterization of the anti-PD-1 antibody nivolumab, including its specificity, binding affinity and its in vivo and in vitro properties. This chimeric rabbit antibody was made using the variable domain sequences of the original Human IgG4 format, for improved compatibility with existing reagents, assays and techniques.
Product Categories/Family for anti-PD-1 antibody	cancer; melanoma; lung cancer; kidney cancer; oncology; immune system; adaptive immunity; cytokines; biosimilar
References	Wang et al. Cancer Immunol Res. 2014 Sep;2(9):846-56.

NCBI AND UNIPROT INFORMATION

NCBI GI #	145559515
NCBI GeneID	5133
UniProt Accession #	Q15116; O00517; Q8IX89
Molecular Weight	31,647 Da
NCBI Official Full Name	Programmed cell death protein 1
NCBI Official Synonym Full Names	programmed cell death 1
NCBI Official Symbol	PDCD1
NCBI Official Synonym Symbols	PD1; PD-1; CD279; SLEB2; hPD-1; hPD-I; hSLE1
NCBI Protein Information	programmed cell death protein 1
UniProt Protein Name	Programmed cell death protein 1
UniProt Gene Name	PDCD1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/human-antibody/pd-1/72300>