



Nivolumab

Targets (1)

IDENTIFICATION

Name

Nivolumab

Accession Number

DB09035 (DB06132)

Type

Biotech

Groups

Approved

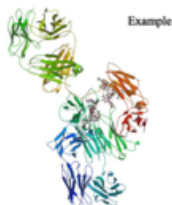
Biologic Classification

Protein Based Therapies
Monoclonal antibody (mAb)

Description

Nivolumab is a fully human IgG4 monoclonal antibody that acts as an immunomodulator by blocking ligand activation of programmed cell death 1 (PD-1) receptor on T cells. It is indicated for use in patients with unresectable (cannot be surgically removed) or metastatic melanoma who no longer respond to other drugs. Nivolumab is administered as an intravenous infusion over 60 minutes every 2 weeks.

Protein structure



Protein chemical formula

$C_{6362}H_{9862}N_{1712}O_{1995}S_{42}$

Protein average weight

143597.3811 Da

Sequences

>Heavy Chain Sequence

```
VVTVPSSSLGKTKTYTCNVDPKPSNTKVDKRVESKYGPPCPPCAPEFLGGPSVFLFPPKP
KDTLMISRTPPEVTCVVVDVSDQEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLT
VLHQDWLNGKEYKCKVSNKGLPSSIEKTKSKAKGQPREPQVYTLPPSQEEMTKNQVSLTC
LVKGFYPSDIAVEWESNGQPENNYKTTPVLDSDGSFFFLYSRLTVDKSRWQEGNVFSCSV
MHEALHNHYTQKSLSLGLGK
```

>Light Chain Sequence

```
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPA
RFGSGSGTDFTLTISSLEPEDFAVYYCQQSSNWPRTFGQGTKVEIKRTVAAPSVFIFPP
SDEQLKSGTASVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKSTYSLSSTLT
LSKADYEKHKVYACEVTHQGLSPVTKSFNRGEC
```

[Download FASTA Format](#)
Synonyms

Not Available

External IDs ⓘ

BMS-936558 / GTPL7335 / MDX-1106 / ONO-4538

Prescription Products

NAME	DOSAGE	STRENGTH	ROUTE	LABELLER	MARKETING START	MARKETING END			
Opdivo	Solution	10 mg	Intravenous	Bristol Myers Squibb	2015-10-23	Not applicable			
Opdivo	Injection	10 mg/mL	Intravenous	E.R. Squibb & Sons, L.L.C.	2014-12-22	Not applicable			
Opdivo	Injection	10 mg/mL	Intravenous	E.R. Squibb & Sons, L.L.C.	2017-12-08	Not applicable			
Opdivo	Solution	10 mg	Intravenous	Bristol Myers Squibb	2015-10-23	Not applicable			
Opdivo	Injection	10 mg/mL	Intravenous	E.R. Squibb & Sons, L.L.C.	2014-12-22	Not applicable			

Showing 1 to 5 of 5 entries

< >

Categories[Amino Acids, Peptides, and Proteins](#)[Antibodies](#)[Antibodies, Monoclonal](#)[Antineoplastic Agents](#)[Antineoplastic and Immunomodulating Agents](#)[Blood Proteins](#)

[immunoglobulins](#)[Immunoproteins](#)[Programmed Death Receptor-1 Blocking Antibody](#)[Proteins](#)[Serum Globulins](#)**UNII**[31YO63LBSN](#)**CAS number**

946414-94-4

PHARMACOLOGY**Indication**

Nivolumab is indicated for the treatment of unresectable or metastatic melanoma for patients who no longer respond to treatment with other drugs. It is intended for use in patients who have been previously treated with ipilimumab and is used for melanoma patients after treatment with ipilimumab and a BRAF inhibitor in patients whose tumors express BRAF V600 gene mutations. Historically there have been very few effective treatments for advanced melanoma, which is why this product was approved under an FDA accelerated program to allow earlier patient access.

Structured Indications ⓘ[Metastatic Melanoma](#)[Refractory Hodgkin Lymphoma](#)[Unresectable Melanoma](#)[Refractory, advanced Renal cell carcinoma](#)[Refractory, metastatic Non-small cell lung cancer](#)[Refractory, metastatic Renal cell carcinoma](#)**Pharmacodynamics**

Not Available

Mechanism of action

Nivolumab is a human immunoglobulin G4 (IgG4) monoclonal antibody that binds to the programmed cell death 1 (PD-1) receptor and selectively blocks interaction with its programmed death ligands PD-L1 and PD-L2. Upregulation of PD-1 ligands occurs in some tumors and signalling through this pathway can contribute to inhibition of active T-cell immune surveillance of tumour tissue. The inhibitory effect of PD-1 and its ligands occurs through the promotion of apoptosis in antigen specific T cells while simultaneously blocking apoptosis in suppressor T cells. Blocking PD-1 activity has been shown to lead to decreased tumour growth in mouse tumour models.

[A Programmed cell death protein 1](#)

antibody

Human



The intended route of administration is intravenous, therefore bioavailability is expected to be 100%.

Volume of distribution

8.0 L

Protein binding

Not Available

Metabolism

As nivolumab is an antibody, the expected consequence of metabolism is proteolytic degradation to small peptides and individual amino acids, and receptor-mediated clearance.

Route of elimination

Renal clearance is negligible as vedolizumab is a high molecular weight protein.

Half life

26.7 days

Clearance

9.5 mL/hr

Toxicity

Based on data from animal studies, there is risk of fetal harm when administered to pregnant women. It is therefore advisable for pregnant women to use contraception during treatment and for 5 months afterwards. There have been reported cases of severe pneumonitis or interstitial lung disease, including fatal cases, with the use of nivolumab during clinical trials. Therefore, patients taking this drug should be monitored for signs and symptoms of pneumonitis. During clinical trials there have also been reports of the development of immune-mediated colitis, immune-mediated hepatitis with increased liver test abnormalities, immune-mediated nephritis and renal dysfunction, immune-mediated hypothyroidism and hyperthyroidism, and rare cases of other immune-mediated reactions such as pancreatitis, uveitis, demyelination, autoimmune neuropathy, adrenal insufficiency, and facial and abducens nerve paresis.

Affected organisms

Not Available

Pathways

Not Available

Pharmacogenomic Effects/ADRs [i](#)

Not Available

INTERACTIONS



DRUG	INTERACTION	DRUG GROUP
Acetyldigitoxin	Acetyldigitoxin may decrease the cardiotoxic activities of Nivolumab.	Approved
Acetyldigoxin	Acetyldigoxin may decrease the cardiotoxic activities of Nivolumab.	Experimental
Ancestim	The risk or severity of cytotoxicity can be increased when Ancestim is combined with Nivolumab.	Approved, Investigational, Withdrawn
Anthrax immune globulin human	The therapeutic efficacy of Anthrax immune globulin human can be decreased when used in combination with Nivolumab.	Approved
Bacillus calmette-guerin substrain connaught live antigen	The therapeutic efficacy of Bacillus calmette-guerin substrain connaught live antigen can be decreased when used in combination with Nivolumab.	Approved, Investigational
Bacillus calmette-guerin substrain tice live antigen	The therapeutic efficacy of Bacillus calmette-guerin substrain tice live antigen can be decreased when used in combination with Nivolumab.	Approved
BCG vaccine	The therapeutic efficacy of BCG vaccine can be decreased when used in combination with Nivolumab.	Investigational
Belimumab	The risk or severity of adverse effects can be increased when Nivolumab is combined with Belimumab.	Approved
Bevacizumab	Bevacizumab may increase the cardiotoxic activities of Nivolumab.	Approved, Investigational
Cabazitaxel	The risk or severity of adverse effects can be increased when Cabazitaxel is combined with Nivolumab.	Approved
Clostridium tetani toxoid antigen (formaldehyde inactivated)	The therapeutic efficacy of Clostridium tetani toxoid antigen (formaldehyde inactivated) can be decreased when used in combination with Nivolumab.	Approved
Corynebacterium diphtheriae toxoid antigen (formaldehyde inactivated)	The therapeutic efficacy of Corynebacterium diphtheriae toxoid antigen (formaldehyde inactivated) can be decreased when used in combination with Nivolumab.	Approved
Cyclophosphamide	Cyclophosphamide may increase the cardiotoxic activities of Nivolumab.	Approved, Investigational
Cymarin	Cymarin may decrease the cardiotoxic activities of Nivolumab.	Experimental
Deslanoside	Deslanoside may decrease the cardiotoxic activities of Nivolumab.	Approved
Digitoxin	Digitoxin may decrease the cardiotoxic activities of Nivolumab.	Approved, Investigational
Digoxin	Digoxin may decrease the cardiotoxic activities of Nivolumab.	Approved
Digoxin Immune Fab (Ovine)	Digoxin Immune Fab (Ovine) may decrease the cardiotoxic activities of Nivolumab.	Approved
Docetaxel	The risk or severity of adverse effects can be increased when Docetaxel is combined with Nivolumab.	Approved, Investigational
G17DT	The therapeutic efficacy of G17DT can be decreased when used in combination with Nivolumab.	Investigational
GI-5005	The therapeutic efficacy of GI-5005 can be decreased when used in combination with Nivolumab.	Investigational
Gitoformate	Gitoformate may decrease the cardiotoxic activities of Nivolumab.	Experimental
Hepatitis A Vaccine	The therapeutic efficacy of Hepatitis A Vaccine can be decreased when used in combination with Nivolumab.	Approved
Hepatitis B Vaccine (Recombinant)	The therapeutic efficacy of Hepatitis B Vaccine (Recombinant) can be decreased when used in combination with Nivolumab.	Approved, Withdrawn
Human anti-hepatitis B immune globulin	The therapeutic efficacy of Human anti-hepatitis B immune globulin can be decreased when used in combination with Nivolumab.	Approved



INGN 201	The therapeutic efficacy of INGN 201 can be decreased when used in combination with Nivolumab.	Investigational
INGN 225	The therapeutic efficacy of INGN 225 can be decreased when used in combination with Nivolumab.	Investigational
Japanese encephalitis virus strain sa 14-14-2 antigen (formaldehyde inactivated)	The therapeutic efficacy of Japanese encephalitis virus strain sa 14-14-2 antigen (formaldehyde inactivated) can be decreased when used in combination with Nivolumab.	Approved
Lanatoside C	Lanatoside C may decrease the cardiotoxic activities of Nivolumab.	Experimental
Metildigoxin	Metildigoxin may decrease the cardiotoxic activities of Nivolumab.	Experimental
Oleandrin	Oleandrin may decrease the cardiotoxic activities of Nivolumab.	Experimental, Investigational
Ouabain	Ouabain may decrease the cardiotoxic activities of Nivolumab.	Approved
Paclitaxel	The risk or severity of adverse effects can be increased when Paclitaxel is combined with Nivolumab.	Approved, Vet Approved
Peruvoside	Peruvoside may decrease the cardiotoxic activities of Nivolumab.	Experimental
Proscillaridin	Proscillaridin may decrease the cardiotoxic activities of Nivolumab.	Experimental
Rabies virus inactivated antigen, A	The therapeutic efficacy of Rabies virus inactivated antigen, A can be decreased when used in combination with Nivolumab.	Approved, Investigational
Rindopepimut	The therapeutic efficacy of Rindopepimut can be decreased when used in combination with Nivolumab.	Investigational
Rotavirus Vaccine	The therapeutic efficacy of Rotavirus Vaccine can be decreased when used in combination with Nivolumab.	Approved
Rubella virus vaccine	The therapeutic efficacy of Rubella virus vaccine can be decreased when used in combination with Nivolumab.	Approved, Investigational
Salmonella typhi ty2 vi polysaccharide antigen	The therapeutic efficacy of Salmonella typhi ty2 vi polysaccharide antigen can be decreased when used in combination with Nivolumab.	Approved
Salmonella typhi ty21a live antigen	The therapeutic efficacy of Salmonella typhi ty21a live antigen can be decreased when used in combination with Nivolumab.	Approved
SRP 299	The therapeutic efficacy of SRP 299 can be decreased when used in combination with Nivolumab.	Investigational
Tecemotide	The therapeutic efficacy of Tecemotide can be decreased when used in combination with Nivolumab.	Investigational
TG4010	The therapeutic efficacy of TG4010 can be decreased when used in combination with Nivolumab.	Investigational
Trastuzumab	Trastuzumab may increase the cardiotoxic activities of Nivolumab.	Approved, Investigational
Varicella Zoster Vaccine (Live/Attenuated)	The therapeutic efficacy of Varicella Zoster Vaccine (Live/Attenuated) can be decreased when used in combination with Nivolumab.	Approved
Yellow fever vaccine	The therapeutic efficacy of Yellow fever vaccine can be decreased when used in combination with Nivolumab.	Approved, Investigational

Showing 1 to 47 of 47 entries

< >

Food Interactions

Not Available

REFERENCES



1. Taneja SS: Re: Safety, activity, and immune correlates of anti-PD-1 antibody in cancer. J Urol. 2012 Dec;188(6):2149. [PubMed:23289116]
2. Tsai KK, Zarzoso I, Daud AI: PD-1 and PD-L1 antibodies for melanoma. Hum Vaccin Immunother. 2014;10(11):3111-6. doi: 10.4161/21645515.2014.983409. [PubMed:25625924]
3. Topalian SL, Sznol M, McDermott DF, Kluger HM, Carvajal RD, Sharfman WH, Brahmer JR, Lawrence DP, Atkins MB, Powderly JD, Leming PD, Lipson EJ, Puzanov I, Smith DC, Taube JM, Wigginton JM, Kollia GD, Gupta A, Pardoll DM, Sosman JA, Hodi FS: Survival, durable tumor remission, and long-term safety in patients with advanced melanoma receiving nivolumab. J Clin Oncol. 2014 Apr 1;32(10):1020-30. doi: 10.1200/JCO.2013.53.0105. Epub 2014 Mar 3. [PubMed:24590637]

External Links

KEGG Drug

[D10316](#)

PubChem Substance

[347910393](#)

ChEMBL

[CHEMBL2108738](#)

RxList

[RxList Drug Page](#)

Drugs.com

[Drugs.com Drug Page](#)

Wikipedia

[Nivolumab](#)

ATC Codes

[L01XC17 – Nivolumab](#)

- [L01XC – Monoclonal antibodies](#)
- [L01X – OTHER ANTINEOPLASTIC AGENTS](#)
- [L01 – ANTINEOPLASTIC AGENTS](#)
- [L – ANTINEOPLASTIC AND IMMUNOMODULATING AGENTS](#)

AHFS Codes

10:00.00 – Antineoplastic Agents

FDA label

[Download](#) (315 KB)

CLINICAL TRIALS

Clinical Trials [?](#)

Search

PHASE ↕	STATUS ↕	PURPOSE ↕	CONDITIONS	COUNT ↕
0	Not Yet Recruiting	Treatment	Human Immunodeficiency Virus Infection(HIV)/Acquired Immunodeficiency Syndrome (AIDS) / Immunosuppression / Kaposi s Sarcoma (KS)	1



0	Not Yet Recruiting	Treatment	Lymphoma, Large B-Cell, Diffuse (DLBCL)	1
0	Recruiting	Basic Science	Lung Cancer Non-Small Cell Cancer (NSCLC)	1
0	Recruiting	Treatment	Larynx / Lip, Oral Cavity and Pharynx	2
0	Recruiting	Treatment	Liver Cancer	1
0	Recruiting	Treatment	Melanoma (Skin) / Skin Cancers	1
0	Recruiting	Treatment	Metastatic Non-Small Cell Lung Cancer	1
0	Recruiting	Treatment	Renal Cancers	1
1	Active Not Recruiting	Basic Science	Advanced Melanoma / Metastatic Melanoma	1
1	Active Not Recruiting	Basic Science	Renal Cell Adenocarcinoma	1
1	Active Not Recruiting	Treatment	Advanced Solid Tumors, Including But Not Limited to Lung Cancer / Cancer of the Ovary / Colorectal Cancers / Glioblastoma Multiforme (GBM) / Head and Neck Carcinoma / Head and Neck Squamous Cell Cancer / Lung Cancer Non-Small Cell Cancer (NSCLC) / Malignant Gliomas / Malignant Neoplasm of Pancreas / Melanoma / Renal Cell Adenocarcinoma	1
1	Active Not Recruiting	Treatment	Astrocytomas / Glioblastomas / Malignant Gliomas	1
1	Active Not Recruiting	Treatment	B Acute Lymphoblastic Leukemia With t(9;22)(q34;q11.2); BCR-ABL1 / Recurrent Adult Acute Lymphoblastic Leukemia / Recurrent Childhood Acute Lymphoblastic Leukemia / Refractory Adult Acute Lymphoblastic Leukemia / Refractory Childhood Acute Lymphoblastic Leukemia	1
1	Active Not Recruiting	Treatment	Cancer of the Ovary / Cancer, Breast / Carcinoma, Colorectal / Carcinoma, Pancreatic / Melanoma / Non-Small Cell Lung Carcinoma (NSCLC) / Prostate Cancer / Renal Cell Adenocarcinoma / Tumors, Solid	1
1	Active Not Recruiting	Treatment	Chronic Myeloid Leukemia (CML)	1
1	Active Not Recruiting	Treatment	CcRCC / Clear Cell Renal Cell Carcinoma / RCC / Renal Cancers / Renal Cell Adenocarcinoma	1
1	Active Not Recruiting	Treatment	Clear-cell Metastatic Renal Cell Carcinoma / Renal Cell Adenocarcinoma	1
1	Active Not Recruiting	Treatment	Glioblastomas / Gliosarcoma / Supratentorial Glioblastoma	1
1	Active Not Recruiting	Treatment	Lung Cancer Non-Small Cell Cancer (NSCLC)	2
1	Active Not Recruiting	Treatment	Lung Cancer Non-Small Cell Cancer (NSCLC) / Metastatic Castration-resistant Prostrate Cancer / Metastatic Castration-resistant Prostrate Cancer (mCRPC) / Metastatic Melanoma / Metastatic Melanoma (MEL) / Renal Cell Adenocarcinoma	1
1	Active Not Recruiting	Treatment	Lymphoma, Hodgkins / Multiple Myeloma (MM) / Non-Hodgkin's Lymphoma (NHL)	1
1	Active Not Recruiting	Treatment	Malignant Lymphomas / Malignant Solid Tumours	1
1	Active Not Recruiting	Treatment	Malignant Melanoma	1
1	Active Not Recruiting	Treatment	Melanoma (Skin)	2
1	Active Not Recruiting	Treatment	Tumors, Solid	1



1	Completed	Other	Severe Sepsis	1
1	Completed	Treatment	Advanced Solid Tumors / Recurrent Solid Tumors	1
1	Completed	Treatment	Colorectal Cancers / Lung Cancer Non-Small Cell Cancer (NSCLC) / Malignant Melanoma / Prostate Cancer / Renal Cancers	1
1	Completed	Treatment	Malignant Melanoma	1
1	Completed	Treatment	Malignant Solid Tumours	1
1	Completed	Treatment	Neoplasms by Site	1
1	Not Yet Recruiting	Health Services Research	Glioblastomas	1
1	Not Yet Recruiting	Treatment	Blasts 30 Percent or Less of Bone Marrow Nucleated Cells / Chronic Myelomonocytic Leukemia / High Risk Myelodysplastic Syndrome / Leukemia Acute Myeloid Leukemia (AML) / Myelodysplastic Syndrome / Refractory Anemia	1
1	Not Yet Recruiting	Treatment	Breast Adenocarcinoma / Recurrent Breast Carcinoma / Recurrent Hodgkin Lymphoma / Recurrent Mycosis Fungoides / Recurrent Non-Hodgkin Lymphoma / Recurrent Primary Cutaneous T-Cell Non-Hodgkin Lymphoma / Refractory Hodgkin Lymphoma / Refractory Mycosis Fungoides / Refractory Nodal Marginal Zone Lymphoma / Refractory Non-Hodgkin's lymphoma / Refractory Primary Cutaneous T-Cell Non-Hodgkin Lymphoma / Stage IV Breast Cancer AJCC v6 and v7	1
1	Not Yet Recruiting	Treatment	Cancers	1
1	Not Yet Recruiting	Treatment	Follicular Lymphoma (FL)	1
1	Not Yet Recruiting	Treatment	Hepatocellular,Carcinoma	1
1	Not Yet Recruiting	Treatment	Leptomeningeal Disease / Melanoma and Other Malignant Neoplasms of Skin	1
1	Not Yet Recruiting	Treatment	Locally Advanced Hepatocellular Carcinoma	1
1	Not Yet Recruiting	Treatment	Metastatic Melanoma / Stage III Cutaneous Melanoma AJCC v7 / Stage IIIA Cutaneous Melanoma AJCC v7 / Stage IIIB Cutaneous Melanoma AJCC v7 / Stage IIIC Cutaneous Melanoma AJCC v7 / Stage IV Cutaneous Melanoma AJCC v6 and v7	1
1	Not Yet Recruiting	Treatment	Neuroblastomas	1
1	Not Yet Recruiting	Treatment	Newly Diagnosed Glioblastoma	1
1	Not Yet Recruiting	Treatment	Recurrent Non-small Cell Lung Cancer	1
1	Not Yet Recruiting	Treatment	Transitional Cell Carcinoma	1
1	Recruiting	Basic Science	Soft Tissue Sarcoma Adult	1
1	Recruiting	Other	Melanoma	1
1	Recruiting	Treatment	ALK-positive NSCLC	1
1	Recruiting	Treatment	Acute Myeloid Leukemia and Myelodysplastic Syndrome	1



1	Recruiting	Treatment	Adenocarcinoma of the Pancreas / Colon Carcinoma Metastatic in the Liver / Colorectal Adenocarcinoma / Resectable Pancreatic Carcinoma / Stage I Pancreatic Cancer / Stage IA Pancreatic Cancer / Stage IB Pancreatic Cancer / Stage II Pancreatic Cancer / Stage IIA Pancreatic Cancer / Stage IIB Pancreatic Cancer / Stage III Pancreatic Cancer / Stage IV Colorectal Cancer / Stage IVA Colorectal Cancer / Stage IVB Colorectal Cancer	1
1	Recruiting	Treatment	Adenocarcinomas of the Gastroesophageal Junction / Gastric Adenocarcinoma	1
1	Recruiting	Treatment	Adenocarcinomas / Advanced NSCLC / Carcinoma, Adenosquamous / Lung Cancer Non-Small Cell Cancer (NSCLC) / Metastatic Non-Small Cell Lung Cancer / Squamous Cell Carcinoma (SCC)	1
1	Recruiting	Treatment	Adrenocortical Carcinoma (Part G) / Advanced Solid Tumors (Part A/B/C/D) / Melanoma (Part E) / Mesothelioma (Part G) / Non-small Cell Lung Cancer (NSCLC) and Melanoma (Part E) / Non-small Cell Lung Cancer (Part E) / Squamous Cell Cancer of the Head and Neck (Part E) / Triple Negative Breast Cancer (Part F)	1
1	Recruiting	Treatment	Adult Solid Neoplasm / Advanced Malignant Solid Neoplasm / Anal Carcinoma / Human Immunodeficiency Virus (HIV) Infections / Kaposi s Sarcoma (KS) / Lung, Carcinoma / Metastatic Malignant Solid Neoplasm / Metastatic Solid Neoplasm / Neoplasms, Advanced Solid / Recurrent Classical Hodgkin Lymphoma / Refractory Classical Hodgkin Lymphoma / Unresectable Solid Neoplasm	1
1	Recruiting	Treatment	Adult Solid Neoplasm / Childhood Solid Neoplasm / Neoplasms, Metastatic	1
1	Recruiting	Treatment	Advanced Cancers	1
1	Recruiting	Treatment	Advanced Malignancies	1
1	Recruiting	Treatment	Advanced Solid Tumors	4
1	Recruiting	Treatment	Advanced Solid Tumors / Cancers	1
1	Recruiting	Treatment	Advanced Solid Tumors / Head and Neck Carcinoma, Squamous Cell / Lung Cancer Non-Small Cell Cancer (NSCLC) / Triple-Negative Breast Neoplasms	1
1	Recruiting	Treatment	Advanced or Metastatic Solid Tumors	2
1	Recruiting	Treatment	Aggressive Non-Hodgkin Lymphoma / Neoplasms, Advanced Solid / Recurrent Solid Neoplasm / Refractory Mantle Cell Lymphoma / T-Cell Non-Hodgkin Lymphoma / Unresectable Solid Neoplasm	1
1	Recruiting	Treatment	B Acute Lymphoblastic Leukemia / B Acute Lymphoblastic Leukemia With t(9;22)(q34.1;q11.2); BCR-ABL1 / CD19-Positive Neoplastic Cells Present / Mixed Phenotype Acute Leukemia (MPAL) / Mixed Phenotype Acute Leukemia With t(9;22)(q34.1;q11.2); BCR-ABL1	1
1	Recruiting	Treatment	BRAF V600E Mutation Present / BRAF V600K Mutation Present / Metastatic Melanoma / Stage III Cutaneous Melanoma AJCC v7 / Stage IIIA Cutaneous Melanoma AJCC v7 / Stage IIIA Skin Melanoma / Stage IIIB Cutaneous Melanoma AJCC v7 / Stage IIIB Skin Melanoma / Stage IIIC Cutaneous Melanoma AJCC v7 / Stage IIIC Skin Melanoma / Stage IV Cutaneous Melanoma AJCC v6 and v7 / Stage IV Skin Melanoma / Stages III Skin Melanoma	1
1	Recruiting	Treatment	Bladder Cancers	1
1	Recruiting	Treatment	Bladder Carcinoma / Colorectal Cancers / Salivary Gland Cancers / Squamous Cell Carcinoma of the Head and Neck (SCCHN)	1
1	Recruiting	Treatment	Bladder Tumors / Lung Cancer Non-Small Cell Cancer (NSCLC) / Lung Cancers / Malignant Melanoma / Melanoma / Skin Cancers / Transitional Cell Carcinoma of the Bladder / Urinary Bladder Cancer	1



1	Recruiting	Treatment	Breast Adenocarcinoma / HER2/Neu Negative / Invasive Breast Carcinoma / Metastatic Malignant Solid Neoplasm / Metastatic Solid Neoplasm / Recurrent Breast Carcinoma / Solid Neoplasms / Stage III Breast Cancer / Stage III Breast Cancer AJCC v7 / Stage IIIA Breast Cancer / Stage IIIA Breast Cancer AJCC v7 / Stage IIIB Breast Cancer / Stage IIIB Breast Cancer AJCC v7 / Stage IIIC Breast Cancer / Stage IIIC Breast Cancer AJCC v7 / Stage IV Breast Cancer / Stage IV Breast Cancer AJCC v6 and v7 / Unresectable Solid Neoplasm	1
1	Recruiting	Treatment	Cancer of the Ovary / Fallopian Tubes / Primary Peritoneal Cancer / Recurrent Ovarian Cancer	1
1	Recruiting	Treatment	Cancer, Advanced	3
1	Recruiting	Treatment	Cancers	2
1	Recruiting	Treatment	Chordomas	1
1	Recruiting	Treatment	Classical Hodgkin Lymphoma / Recurrent Adult Hodgkin's Lymphoma / Recurrent Hodgkin Lymphoma / Refractory Hodgkin Lymphoma	1
1	Recruiting	Treatment	Clear Cell Renal Cell Carcinoma	1
1	Recruiting	Treatment	Clear Cell Renal Cell Carcinoma / Malignant Reproductive System Neoplasm / Malignant Urinary System Neoplasm / Metastatic Malignant Neoplasm in the Bone / Metastatic Penile Carcinoma / Metastatic Urethral Neoplasm / Metastatic Urothelial Carcinoma of the Renal Pelvis and Ureter / Progressive Neoplastic Disease / Recurrent Bladder Carcinoma / Recurrent Urethra Carcinoma / Recurrent Urothelial Carcinoma of the Renal Pelvis and Ureter / Regional Urothelial Carcinoma of the Renal Pelvis and Ureter / Renal Pelvis Urothelial Carcinoma / Solid Neoplasms / Squamous Cell Carcinoma of the Penis / Stage III Bladder Adenocarcinoma / Stage III Bladder Adenocarcinoma AJCC v6 and v7 / Stage III Bladder Squamous Cell Carcinoma / Stage III Bladder Squamous Cell Carcinoma AJCC v6 and v7 / Stage III Bladder Urothelial Carcinoma / Stage III Bladder Urothelial Carcinoma AJCC v6 and v7 / Stage III Penile Cancer / Stage III Penile Cancer AJCC v7 / Stage III Renal Cell Cancer / Stage III Renal Cell Cancer AJCC v7 / Stage III Renal Pelvis Cancer AJCC v7 / Stage III Renal Pelvis Carcinoma / Stage III Ureter Cancer / Stage III Ureter Cancer AJCC v7 / Stage III Urethral Cancer / Stage III Urethral Cancer AJCC v7 / Stage IIIa Penile Cancer / Stage IIIa Penile Cancer AJCC v7 / Stage IIIb Penile Cancer / Stage IIIb Penile Cancer AJCC v7 / Stage IV Bladder Adenocarcinoma / Stage IV Bladder Adenocarcinoma AJCC v7 / Stage IV Bladder Squamous Cell Carcinoma / Stage IV Bladder Squamous Cell Carcinoma AJCC v7 / Stage IV Bladder Urothelial Carcinoma / Stage IV Bladder Urothelial Carcinoma AJCC v7 / Stage IV Penile Cancer / Stage IV Penile Cancer AJCC v7 / Stage IV Renal Cell Cancer / Stage IV Renal Cell Cancer AJCC v7 / Stage IV Renal Pelvis Cancer AJCC v7 / Stage IV Renal Pelvis Carcinoma / Stage IV Ureter Cancer / Stage IV Ureter Cancer AJCC v7 / Stage IV Urethral Cancer / Stage IV Urethral Cancer AJCC v7 / Ureter Urothelial Carcinoma / Urethral Urothelial Carcinoma	1
1	Recruiting	Treatment	Clear Cell Renal Cell Carcinoma / Stage I Renal Cell Cancer / Stage I Renal Cell Cancer AJCC v6 and v7 / Stage II Renal Cell Cancer / Stage II Renal Cell Cancer AJCC v7 / Stage III Renal Cell Cancer / Stage III Renal Cell Cancer AJCC v7	1
1	Recruiting	Treatment	EBV Related Hodgkin's Lymphoma / EBV Related Lymphoma / EBV Related Non-Hodgkin's Lymphoma / EBV-Related PTLD / Lymphoma, Hodgkins / Lymphoproliferative Disorders / NonHodgkin Lymphoma	1
1	Recruiting	Treatment	Esophageal Cancers / Gastroesophageal Cancer / Malignant Neoplasm of Stomach	1
1	Recruiting	Treatment	Esophageal Cancers / Lung Cancers / Malignant Neoplasm of Stomach / Renal Cancers	1
1	Recruiting	Treatment	Fallopian Tubes / High Grade Serous Ovarian / Primary Peritoneal Cancer	1



1	Recruiting	Treatment	Follicular Lymphoma (FL)	1
1	Recruiting	Treatment	Glioblastomas	2
1	Recruiting	Treatment	Glioblastomas / Gliosarcoma / Recurrent Brain Neoplasm	1
1	Recruiting	Treatment	Head and Neck Squamous Cell Carcinoma (HNSCC)	1
1	Recruiting	Treatment	Head and Neck Squamous Cell Carcinoma (HNSCC) / Lung Cancer Non-Small Cell Cancer (NSCLC) / Melanoma / Neoplasms / Renal Cell Adenocarcinoma / Urothelial Neoplasm	1
1	Recruiting	Treatment	Hematopoietic Cell Transplantation Recipient / Myelodysplastic Syndrome / Myeloproliferative Neoplasms / Previously Treated Myelodysplastic Syndromes / Recurrent Adult Acute Lymphoblastic Leukemia / Recurrent Adult Acute Myeloid Leukemia / Recurrent Chronic Lymphocytic Leukemia / Recurrent Chronic Myelogenous Leukemia, BCR-ABL1 Positive / Recurrent Hodgkin Lymphoma / Recurrent Non-Hodgkin Lymphoma / Recurrent Plasma Cell Myeloma	1
1	Recruiting	Treatment	Hepatocellular,Carcinoma	2
1	Recruiting	Treatment	Human Papillomavirus Positive Anal Carcinoma / Human Papillomavirus Positive Cervical Carcinoma / Human Papillomavirus Positive Oropharyngeal Carcinoma / Human Papillomavirus Positive Penile Carcinoma / Human Papillomavirus Positive Vulvar Carcinoma / Human Papillomavirus-Related Carcinoma	1
1	Recruiting	Treatment	Lung Cancer Non-Small Cell Cancer (NSCLC)	2
1	Recruiting	Treatment	Lung Cancer Small Cell Lung Cancer (SCLC)	1
1	Recruiting	Treatment	Lymphoma, Hodgkins	1
1	Recruiting	Treatment	Malignancies, Hematologic	1
1	Recruiting	Treatment	Malignant Lymphomas / Metastatic Malignant Solid Neoplasm / Metastatic Melanoma / Metastatic Renal Cell Cancer / Recurrent Bladder Carcinoma / Recurrent Classical Hodgkin Lymphoma / Recurrent Head and Neck Squamous Cell Carcinoma / Recurrent Lymphoma / Recurrent Malignant Solid Neoplasm / Renal Cell Carcinoma Recurrent / Stage III Bladder Cancer / Stage III Lymphoma / Stage III Non-Small Cell Lung Cancer AJCC v7 / Stage III Renal Cell Cancer / Stage IIIA Non-Small Cell Lung Cancer AJCC v7 / Stage IIIA Skin Melanoma / Stage IIIB Non-Small Cell Lung Cancer AJCC v7 / Stage IIIB Skin Melanoma / Stage IIIC Skin Melanoma / Stage IV Bladder Cancer / Stage IV Lymphoma / Stage IV Non-Small Cell Lung Cancer AJCC v7 / Stage IV Renal Cell Cancer / Stage IV Skin Melanoma / Stage IVA Bladder Cancer / Stage IVB Bladder Cancer / Stages III Skin Melanoma / Unresectable Head and Neck Squamous Cell Carcinoma / Unresectable Solid Neoplasm	1
1	Recruiting	Treatment	Melanoma	2
1	Recruiting	Treatment	Metastatic Colorectal Cancers	1
1	Recruiting	Treatment	Metastatic Malignant Neoplasm in the Brain / Metastatic Malignant Neoplasm in the Spine / Stage IV Skin Melanoma	1
1	Recruiting	Treatment	Metastatic Non-Small Cell Lung Cancer	1
1	Recruiting	Treatment	Metastatic Solid Tumors / Treatment-Refractory Cancers	1
1	Recruiting	Treatment	Multiple Myeloma (MM)	1
1	Recruiting	Treatment	Neoplasms Malignant	1
1	Recruiting	Treatment	Neoplasms, Breast / Neoplasms, Pancreatic	1

Showing 1 to 100 of 471 entries

< >

**Manufacturers**

Not Available

Packagers

Not Available

Dosage forms

Search

FORM	↕ ROUTE	↕ STRENGTH	↕
Injection	Intravenous	10 mg/mL	
Solution	Intravenous	10 mg	

Showing 1 to 2 of 2 entries

< >

Prices

Not Available

Patents

Search

PATENT NUMBER	↕ PEDIATRIC EXTENSION	↕ APPROVED	↕ EXPIRES (ESTIMATED)	↕	↕
US2013173223	No	2013-05-13	2033-05-13		

Showing 1 to 1 of 1 entries

< >

PROPERTIES

State

Solid

Experimental Properties

Not Available

TAXONOMY

Description

Not Available

Kingdom

Organic Compounds

Super Class

**Class**

Carboxylic Acids and Derivatives

Sub Class

Amino Acids, Peptides, and Analogues

Direct Parent

Peptides

Alternative Parents

Not Available

Substituents

Not Available

Molecular Framework

Not Available

External Descriptors

Not Available

TARGETS

1. Programmed cell death protein 1**Kind**

Protein

Organism

Human

Pharmacological action Yes**Actions** Antibody**General Function**

Signal transducer activity

Specific Function

Inhibitory cell surface receptor involved in the regulation of T-cell function during immunity and tolerance. Upon ligand binding, inhibits T-cell effector functions in an antigen-specific manner. ...

Gene Name

PDCD1

Uniprot ID

Programmed cell death protein 1

Molecular Weight

31646.635 Da

References

1. Taneja SS: Re: Safety, activity, and immune correlates of anti-PD-1 antibody in cancer. J Urol. 2012 Dec;188(6):2149. [\[PubMed:23289116\]](#)

Drug created on February 24, 2015 16:02 / Updated on February 21, 2018 17:24

About

[About DrugBank](#)
[DrugBank Blog](#)
[Wishart Research Group](#)
[Terms of Use](#)
[Privacy Policy](#)

Support

[FAQ](#)
[Help](#)
[Email Support](#)

DrugBank+

[API Pricing](#)
[API Docs](#)
[Data Licenses](#)
[Support](#)



This project is supported by the **Canadian Institutes of Health Research** (award #111062), **Alberta Innovates - Health Solutions**, and by **The Metabolomics Innovation Centre (TMIC)**, a nationally-funded research and core facility that supports a wide range of cutting-edge metabolomic studies. TMIC is funded by **Genome Alberta**, **Genome British Columbia**, and **Genome Canada**, a not-for-profit organization that is leading Canada's national genomics strategy with funding from the federal government. Maintenance, support, and commercial licensing is provided by **OMx Personal Health Analytics, Inc.** Designed by **Educe Design & Innovation Inc.**



