

Immunotherapy | PD-1 Pathway | IDO Pathway

Immunotherapy

The immune system is a system of cells and organs whose function is to defend an organism from foreign pathogens. With the ability to mount a response against virtually any foreign material and return to a quiescent state following neutralization of the threat, this fascinating organ system displays remarkable specificity and plasticity. To achieve this, there is a multifaceted balancing act between the many activators and suppressors that maintains homeostasis of perhaps the body's most complex organ system.

Activation of the immune system involves a number of checkpoints in order to ensure proper activation. For instance, T cell activation requires binding of the T cell receptor to the MHC antigen, yet this interaction alone is not sufficient for producing a T cell response. Full T cell activation and inactivation requires the coordination of a multitude of co-stimulatory and inhibitory signals. For example, T cell activation can result from the combination of MHC:TCR and B7-1:CD28 interaction. In contrast, B7-1 binding to CTLA4 results in an inhibitory signal that prevents activation.

AMSBIO offers:

- Screening Assays
- Neutralizing antibodies
- Proteins
- Screening service

Assays	Cat #	Size
BTLA:HVEM[Biotinylated] Inhibitor Screening Assay Kit	72008	96 rxn
CD137[Biotinylated]:CD137L Inhibitor Screening Assay Kit	72025	96 rxn
CTLA4:B7-1 (Biotinylated) Inhibitor Screening Assay Kit	72009	96 rxn
OX40 (Biotinylated):OX40L Inhibitor Screening Assay Kit	72045	96 rxn
CD28:B7-1[Biotinylated] Inhibitor Screening Assay Kit	72007	96 rxn
CD47:SIRP-alpha[Biotinylated] Inhibitor Screening Assay Kit	72044	96 rxn
CTLA4[Biotinylated]:B7-2 Inhibitor Screening Assay Kit	72024	96 rxn
IL-17RA[Biotin]:IL-17A Inhibitor Screening Assay Kit	72060	96 rxn

Antibodies	Cat #	Size
Anti-CD20	71209	100 ug
CTLA4 (CD152) Neutralizing Antibody	71212	50 ug
IL-17A Neutralizing Antibody	91015	100 ug

Proteins	Cat #	Size
B7-1 (CD80), Fc Fusion	71125	100 ug
B7-2 (CD86), Fc Fusion	71150	100 ug
B7-H4, His-tag	71144	100 ug
BTLA(CD272), Fc Fusion	71141	100 ug
CD112, His-tag	71197	100 ug
CD137, Fc Fusion	71170	100 ug
CD160, His-tag	71173	100 ug
CD27, Fc Fusion	71176	100 ug
CD40, Fc Fusion	71174	100 ug
CD47, Fc fusion	71177	100 ug
CTLA4 (CD152), Fc Fusion	71149	100 ug
Human CD46-BC, His-tag	71230	100 ug
HVEM, Fc Fusion	71142	100 ug
LAG3 (CD223), Biotin-Labeled	71147	50 ug
OX40 (CD134), Biotin-Labeled, His-tag	71310	50 ug
OX40 (CD134), Fc fusion	71175	100 ug
OX40L (CD252), His-tag	71185	100 ug
SIRP-alpha (CD172a), His-tag	71145	100 ug
TIM-3, Fc Fusion	71151	100 ug
TPH1, His-tag	71192	50 ug
TPH2, His-tag	71193	50 ug
LAT, His-tag	71188	20 ug
TIGIT, Fc fusion	71186	100 ug
IL-17A	91014-2	25 ug
IL-17RA, Fc fusion, Biotin-labeled	91013-2	25 ug

PD-1 receptor

The understanding of the checkpoint signaling pathway involving the programmed death 1 (PD-1) receptor and its ligands (PD-L1/2) in tumor-induced immune suppression has been a critical advancement in immunotherapeutic drug development. Tumors that express PD-L1 can often be aggressive and carry a poor prognosis. The anti-PD-1 and anti-PD-L1 agents have a good safety profile and have resulted in durable responses in a variety of cancers, including melanoma, kidney cancer, and lung cancer. The PD-1/PD-L1 pathway in cancer is implicated in tumors escaping immune destruction and is a promising therapeutic target. The development of anti-PD-1 and anti-PD-L1 agents marks a new era in the treatment of cancer with immunotherapies.

Assay kits	Cat #	Size
PD1:PD-L1 Homogeneous Assay Kit	72014	384 rxn
PD-1:PD-L1 [Biotinylated] Inhibitor Screening Assay Kit	72003	96 rxn
PD-1:PD-L1 (Biotinylated) Inhibitor Screening Colorimetric Assay Kit	72016	96 rxn
PD-1:PD-L2 Homogeneous Assay Kit	72015	384 rxn
PD-1:PD-L2 TR-FRET Assay Kit	72012	384 rxn
PD-1:PD-L2[Biotinylated] Inhibitor Screening Assay Kit	72004	96 rxn
PD-1:PD-L2[Biotinylated] Inhibitor Screening Colorimetric Assay Kit	72017	96 rxn
PD-1 [Biotinylated]:PD-L1 Homogeneous Assay Kit	72028	384 rxn
PD-1 [Biotinylated]:PD-L1 Inhibitor Screening Assay Kit	72005	96 rxn
PD-1 [Biotinylated]:PD-L1 Inhibitor Screening Colorimetric Assay Kit	72018	96 rxn
PD-1 [Biotinylated]:PD-L2 Inhibitor Screening Assay Kit	72006	96 rxn
PD-1 [Biotinylated]:PD-L2 Inhibitor Screening Colorimetric Assay Kit	72019	96 rxn
PD-L1:B7-1 [Biotinylated] Inhibitor Screening Assay Kit	72026	96 rxn

Cell Lines	Cat #	Size
PD-1/NFAT Reporter - Jurkat Recombinant Cell Line	60535	2 vials
TCR Activator / PD-L1 Mammalian Expression Kit	60610	500 rxn

Antibodies	Cat #	Size
PD-1 Neutralizing Antibody	71120	50 ug
Anti-PD-1 Neutralizing Antibody, Biotin-labeled	71215	50 ug
PD-L1 (CD274) Neutralizing Antibody	71213	50 ug
Anti-PD-L1 Neutralizing Antibody, Biotin-labeled	71214	50 ug

Proteins	Cat #	Size
Human PD-1 (CD279), Fc fusion	71106	100 ug
Human PD-1 (CD279), Fc fusion, Biotin-labeled	71109	50 ug
Human PD-1, FLAG-Avi-His-tag	71198	50 ug
Human PD-L1 (CD274), Fc fusion	71104	100 ug
Human PD-L1 (CD274), Fc fusion, Biotin-labeled	71105	50 ug
Human PD-L1 (CD274), FLAG-tag	71183	100 ug
Human PD-L2 (CD273), Fc fusion	71107	100 ug
Human PD-L2 (CD273), Fc fusion, Biotin-labeled	71108	50 ug
Monkey (<i>M. fascicularis</i>) PD-1, Fc fusion	71158	100 ug
Mouse PD-1 (CD279), Fc fusion	71116	100 ug
Mouse PD-L1 (CD274), Fc fusion	71117-2	100 ug

IDO pathway

Immune evasion is one of the identifying hallmarks of cancer, and researchers are trying to identify the complex mechanisms that enable cancer cells to evade the host's immune system. Cancer cells use the indoleamine 2,3-dioxygenase (IDO) pathway to suppress the host's immune response in order to facilitate survival, growth, invasion, and metastasis of malignant cells. The IDO pathway is active in many tumors, providing a direct defense against T cell attack. The IDO pathway also is active in many antigen-presenting cells, resulting in peripheral tolerance to tumor-associated antigens.

Assays	Cat #	Size
Human IDO1 Inhibitor Screening Assay Kit	72021	96 rxn
Human IDO1 Inhibitor Screening Assay Kit	72034	384 rxn
Human IDO2 Inhibitor Screening Assay Kit	72022	96 rxn
Human TDO Inhibitor Screening Assay Kit	72023	96 rxn
Human TDO Inhibitor Screening Assay Kit	72036	384 rxn
Human IDO1 Fluorogenic Inhibitor Screening Assay Kit	72037	96 rxn
Human IDO1 Fluorogenic Inhibitor Screening Assay Kit	72047	384 rxn
Human TDO Fluorogenic Inhibitor Screening Assay Kit	72039	96 rxn
Human TDO Fluorogenic Inhibitor Screening Assay Kit	72049	384 rxn
Human IDO1 Cell-Based Assay Kit	72031	100 rxn
Human TDO Cell-Based Assay Kit	72033	100 rxn

Cell Lines	Cat #	Size
hIDO1- HEK293 Recombinant Cell line	60532	2 vials
hTDO - HEK293 Recombinant Cell line	60534	2 vials

Proteins	Cat #	Size
Human IDO1, His-tag	71182	50 ug
Human IDO2, His-tag	71194	50 ug
Human TDO, His-tag	71195	50 ug

Immunotherapy Screening Services

AMSBIO provides rapid, dependable Immunotherapy Screening Services of small molecules, peptides, and antibodies against requested wide range of targets by IC50 determination. We also offer Cell-Based Immunotherapy Screening services to determine EC50's or screen for inhibitors of a variety of Immunotherapy proteins – PD-1, IDO1, TDO using our cell-based assays.

AMSBIO | www.amsbio.com | info@amsbio.com



UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE, U.K.
T: +44 (0) 1235 828 200
F: +44 (0) 1235 820 482



North America
1035 Cambridge Street,
Cambridge, MA 0 2141.
T: +1 (617) 945-50 33 or
T: +1 (800) 987-0985
F: +1 (617) 945- 8218



Germany
Bockenheimer Landstr. 17/ 19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880



Switzerland
Centro Nord-Sud 2E
CH-6 934 Bioggio-Lugano
T: +41 (0) 91 604 55 22
F: +41 (0) 91 605 17 85

© AMSBIO / AMS Biotechnology (Europe) Ltd Mar 2016