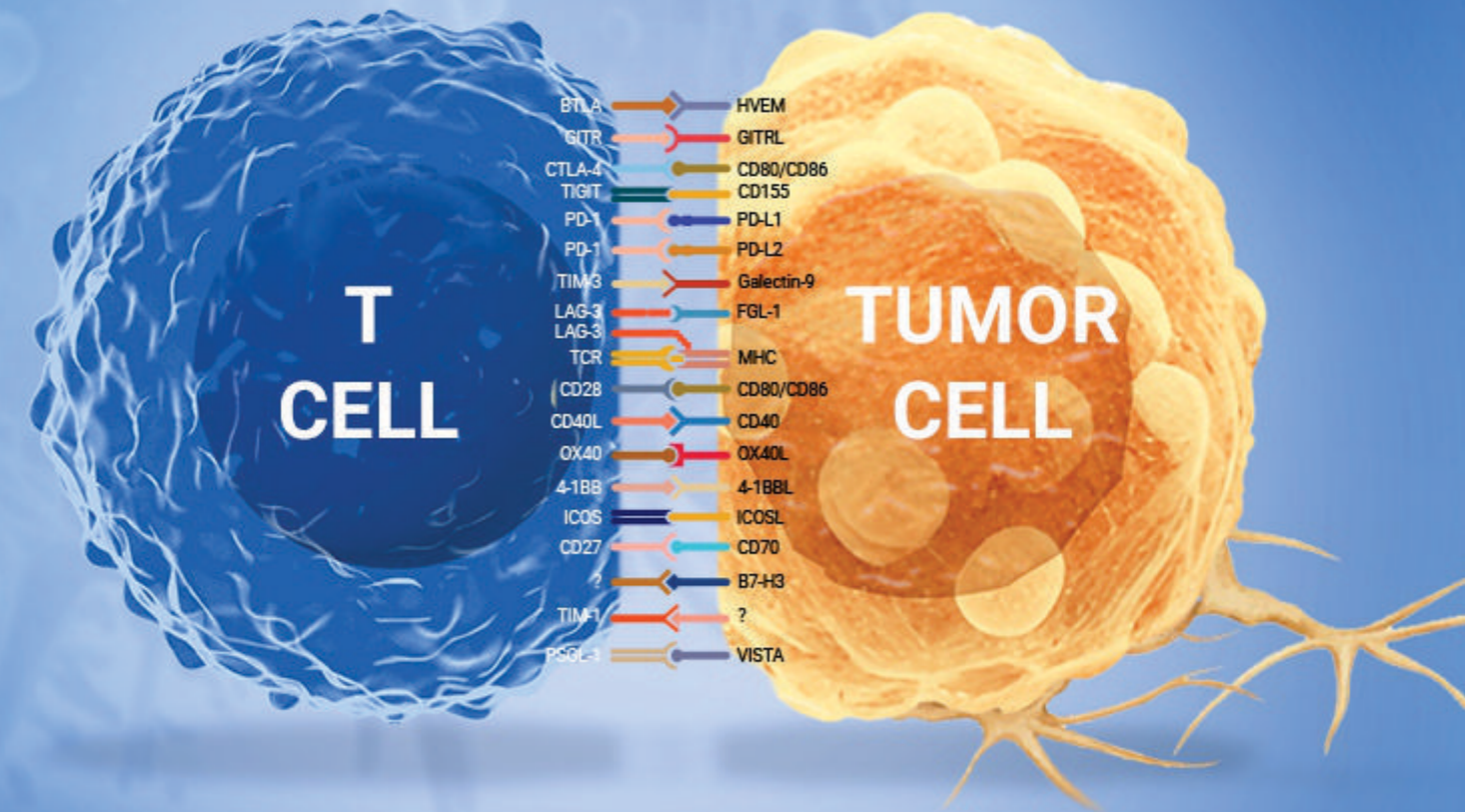


# Immune Checkpoints ELISA kits



Authorized Distributor:

**BTL Biotechno Labs Pvt. Ltd.**

613-A, Ansal Chamber-II, Bhikaji Cama Place  
New Delhi-110066

Mob : +91- 8860924349; 07291852429

E-mail : [info@biotechnolabs.com](mailto:info@biotechnolabs.com)

Web : [www.biotechnolabs.com](http://www.biotechnolabs.com)



**YOUR GOOD PARTNER IN BIOLOGY RESEARCH!**

Postal Address : 7505 Fannin St. Ste 610-322, Houston, TX 77054, USA

Tel : 301-363-4651 (Available 9 a.m. to 5 p.m. CST from Monday to Friday)

Email: [support@cusabio.com](mailto:support@cusabio.com) Web: [www.cusabio.com](http://www.cusabio.com)

Immune checkpoints are molecules that regulate T cell activity and play a crucial role in immune regulation. However, tumor cells can exploit these checkpoints to evade immune attacks, leading to tumor growth and spread. Targeting immune checkpoint molecules through immunotherapy has emerged as a significant breakthrough in cancer and immune-related disease treatment. By inhibiting immune checkpoint proteins, we can relieve immune tolerance and activate suppressed immune responses, particularly in malignant tumors.

Despite its success, immune checkpoint therapy poses challenges. Individual responses to immune checkpoint inhibitors vary, and different tumor types and immune environments can impact treatment outcomes. Prolonged immune activation may also cause autoimmune side effects. Therefore, understanding the mechanisms, signaling pathways, and regulatory networks of immune checkpoints, as well as the molecular mechanisms of tumor immune escape, is crucial for optimizing treatment strategies and developing new drugs.

CISABIO is dedicated to providing researchers with highly accurate and sensitive immune checkpoint ELISA kits, covering a range of key immune checkpoint molecules such as PD-L1 (Cd274), CTLA4, CD70, CD40, HAVCR2, Tnfrsf4, and more. Each kit undergoes rigorous validation and testing to meet the needs of various sample types, helping you accurately measure the expression levels of immune checkpoint-related proteins. This enables a better understanding of the functionality and mechanisms of immune regulation networks, empowering you to make breakthrough progress in the field of tumor immunotherapy.

## 1. Definition of Immune Checkpoints

Immune checkpoints are a class of ligand-receptor pairs that regulate and control immune responses, helping to maintain the balance of the immune system. They can regulate the degree of immune activation, ensuring that the immune system responds appropriately to external stimuli, avoiding excessive activation that may cause indiscriminate attacks on normal cells, and protecting normal tissues from damage.

## 2. Types of Immune Checkpoints

Immune checkpoints include two types: activating immune checkpoints and inhibitory immune checkpoints.

● **Activating immune checkpoints:** These checkpoints can enhance the activity of immune cells and promote immune responses. For example, activating immune checkpoints such as 4-1BB (Cd137), CD28, ICOS, etc., can enhance the activity of T cells and help them kill tumor cells.

● **Inhibitory immune checkpoints:** These checkpoints can suppress the activity of immune cells and hinder immune responses. For example, inhibitory immune checkpoints such as CTLA-4, PD-1, TIGIT, BTLA, etc., can suppress the activity of T cells and reduce their ability to attack tumor cells.

However, scientists have discovered that many cancer cells develop checkpoints that allow them to evade attacks from the immune system, suppressing the immune response of T cells. In response to this theory, immune checkpoint therapy has gained attention. This therapy involves adjusting immune checkpoint molecules to enhance the immune system's ability to attack cancer cells, with immune checkpoints becoming a major target in cancer immunotherapy due to their unique role in immune evasion.

## 3. Immune Checkpoint Inhibitors

Drugs targeting immune checkpoints are mainly divided into inhibitors and activators. While activators are currently in the clinical research stage, the inhibitor track has already seen a constellation of stars.

Immune checkpoint inhibitors (ICIs) are a class of cancer immunotherapy drugs that enhance anti-cancer immune responses by targeting immune receptors on T lymphocytes. Among them, the most popular representative drugs are PD-1/PD-L1 inhibitors. The main principle is to block the binding between the PD-1 receptor and its ligands, PD-L1 and PD-L2, thereby releasing the immune response inhibition mediated by the PD-1 pathway, restoring the activation state of T cells, and enhancing the immune system's ability to attack tumor cells. So far, several PD-1/PD-L1 antibody drugs have been approved, such as Nivolumab, Pembrolizumab, Atezolizumab, Avelumab, etc., becoming star products that have attracted much attention in recent years.

## 4. ELISA Kits for Immune Checkpoints Catalog

Code	Product Name	Detection Range	Target
CSB-EL002961HU	Human Platelet receptor Gi24(C10orf54) ELISA kit	0.156 ng/mL-10 ng/mL	C10orf54
CSB-EL004881HU	Human CD160 antigen(CD160) ELISA kit	0.625 ng/mL-40 ng/mL	CD160
CSB-EL004895RA	Rat OX-2 membrane glycoprotein(CD200) ELISA kit	47 pg/mL-3000 pg/mL	CD200
CSB-EL004901HU	Human CD226 antigen(CD226) ELISA kit	0.9 ng/mL-60 ng/mL	CD226
CSB-E13644h	Human Programmed Death Ligand-1(PD-L1/CD274) ELISA Kit	15.6 pg/mL-1000 pg/mL	CD274
CSB-EL004911MO	Mouse Programmed cell death 1 ligand 1(CD274) ELISA kit	31.25 pg/mL-2000 pg/mL	CD274
CSB-E14285h	Human Soluble CD276,sCD276/sB7-H3 ELISA Kit	3.12 ng/mL-200 ng/mL	CD276
CSB-EL004936MO	Mouse Tumor necrosis factor receptor superfamily member 5(CD40) ELISA kit	/	CD40
CSB-E04716h	Human Soluble Cluster of differentiation 40 ligand,sCD40L ELISA Kit	0.312 ng/mL-20 ng/mL	CD40LG
CSB-E04717m	Mouse Soluble Cluster of differentiation 40 ligand,sCD40L ELISA Kit	0.47 ng/mL-30 ng/mL	CD40LG
CSB-E07395r	Rat Soluble Cluster of differentiation 40 ligand,sCD40L ELISA Kit	1.87 ng/mL-120 ng/mL	CD40LG
CSB-E11846h	Human cluster Of differentiation,CD44 ELISA Kit	78 pg/mL-5000 pg/mL	CD44
CSB-EL004940HU	Human Leukocyte surface antigen CD47(CD47) ELISA kit	3.12 pg/mL-200 pg/mL	CD47
CSB-EL004940MO	Mouse Leukocyte surface antigen CD47(CD47) ELISA kit	15.6 pg/mL-1000 pg/mL	CD47
CSB-EL004941MO	Mouse CD48 antigen(CD48) ELISA kit	/	CD48
CSB-EL004954HU	Human CD70 antigen(CD70) ELISA kit	0.156 ng/mL-10 ng/mL	CD70
CSB-EL004954MO	Mouse CD70 antigen(CD70) ELISA kit	Request Information	CD70
CSB-EL004959MO	Mouse T-lymphocyte activation antigen CD80(CD80) ELISA kit	15.6 pg/mL-1000 pg/mL	CD80
CSB-E15768h	Human Soluble Cluster of Differentiation 80 (sCD80) ELISA Kit	125 pg/mL-8000 pg/mL	CD80
CSB-E08542h	Human soluble Cluster of differentiation 86,sCD86 ELISA Kit	0.312 ng/mL-20 ng/mL	CD86
CSB-E09171h	Human cytotoxic T lymphocyte associated antigen 4,CTLA-4 ELISA Kit	125 pg/mL-8000 pg/mL	CTLA4
CSB-E13637m	Mouse cytotoxic T lymphocyte associated antigen 4,CTLA-4 ELISA Kit	0.312 ng/mL-20 ng/mL	CTLA4
CSB-E12124h	Human epidermal growth factor receptor,EGFR ELISA Kit	0.312 ng/mL-20 ng/mL	EGFR
CSB-EL010145HU	Human Hepatitis A virus cellular receptor 2(HAVCR2) ELISA kit	47 pg/mL-3000 pg/mL	HAVCR2
CSB-E13382h	Human Mesothelin(MSLN)ELISA KIT	62.5 pg/mL-4000 pg/mL	MSLN
CSB-EL021334HU	Human Tyrosine-protein phosphatase non-receptor type substrate 1(SIRPA) ELISA kit	0.156 ng/mL-10 ng/mL	SIRPA
CSB-EL023974HU	Human Tumor necrosis factor receptor superfamily member 17(TNFRSF17) ELISA kit	7.8 pg/ml- 500 pg/ml	TNFRSF17
CSB-EL023974MO	Mouse Tumor necrosis factor receptor superfamily member 17(TNFRSF17) ELISA kit	0.39 ng/ml- 20ng/ml	TNFRSF17
CSB-EL023984HU	Human Tumor necrosis factor receptor superfamily member 9(TNFRSF9) ELISA kit	7.8 pg/mL-500 pg/mL	TNFRSF9
CSB-EL023984MO	Mouse Tumor necrosis factor receptor superfamily member 9(TNFRSF9) ELISA kit	/	TNFRSF9
CSB-EL023991HU	Human Tumor necrosis factor ligand superfamily member 14(TNFSF14) ELISA kit	0.156 ng/mL-10 ng/mL	TNFSF14
CSB-EL023991MO	Mouse Tumor necrosis factor ligand superfamily member 14(TNFSF14) ELISA kit	25 pg/mL-1600 pg/mL	TNFSF14
CSB-EL023991RA	Rat tumor necrosis factor (ligand) superfamily, member 14 (TNFSF14) ELISA kit	15.6 pg/mL-1000 pg/mL	TNFSF14
CSB-E15770h	Human tumor necrosis factor superfamily 15 (TL1A/TNFSF15) ELISA Kit	0.78 ng/mL-50 ng/mL	TNFSF15
CSB-E16311m	Mouse tumor necrosis factor-like ligand 1 (TL1) ELISA kit	62.5 pg/mL-4000 pg/mL	TNFSF15
CSB-EL023992RA	Rat Tumor necrosis factor ligand superfamily member 15(TNFSF15) ELISA kit	25 pg/mL-1600 pg/mL	TNFSF15
CSB-EL023993HU	Human Tumor necrosis factor ligand superfamily member 18(TNFSF18) ELISA kit	/	TNFSF18
CSB-E12752h	Human soluble OX40L (sOX40L) ELISA kit	0.156 ng/mL-10 ng/mL	TNFSF4
CSB-EL023994MO	Mouse Tumor necrosis factor ligand superfamily member 4(TNFSF4) ELISA kit	15.6pg/mL-1000pg/mL	TNFSF4