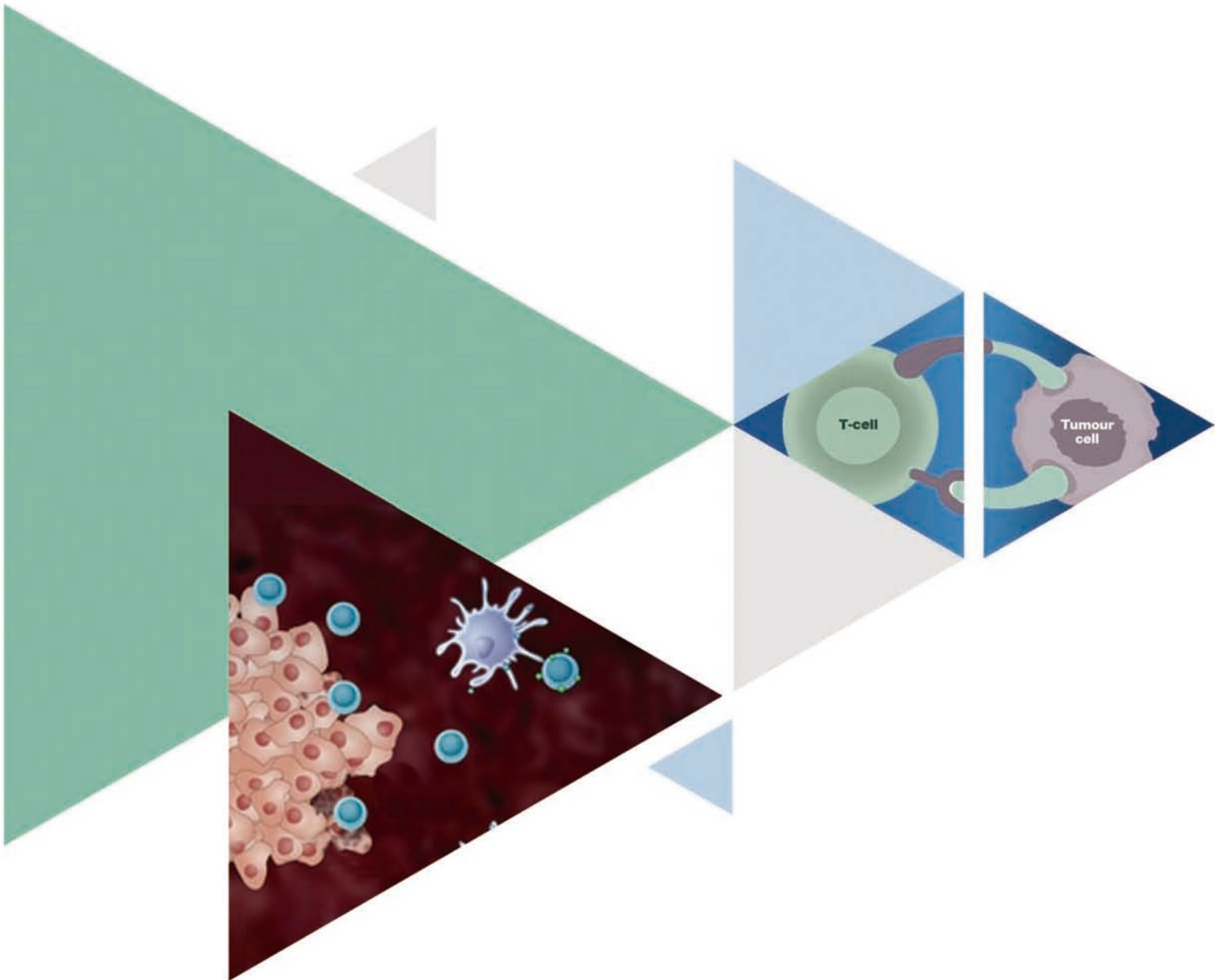


Immune Checkpoint



Sino Biological
Biological Solution Specialist

Immune Checkpoint Proteins

Strengths

- Multiple species: Human, Mouse, Canine, Rat, Rhesus, Cynomolgus;
- High purity (SDS-PAGE);
- Validated bioactivity;
- Endotoxin less than 1EU/μg by the LAL method.
- His-tagged, Fc-tagged and tag free proteins
- Large quantities in stock
- Discount pricing for bulk order

High purity

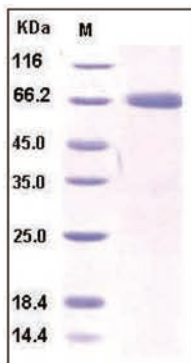


Fig .1 The purity of PD-L1 protein (10084-H02H) was >95% as determined by SDS-PAGE.

Validated activity

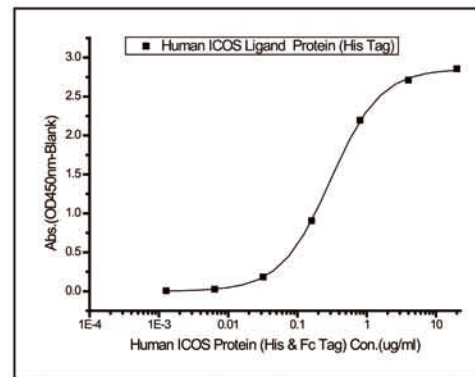


Fig .2 The activity assay of ICOS Ligand protein (Cat: 11559-H08H) by binding to ICOS Protein (Cat: 10344-H03H).

Hot Proteins

Targets	Catalog No.	Targets	Catalog No.	Targets	Catalog No.	Targets	Catalog No.
PD-L1	10377-H08H	PD1	10084-H08H	CTLA-4	11159-H08H	CD80	10698-H08H
CD86	10699-H08H	VISTA	13482-H08H	VISTA	51550-M08H	OX40	10481-H08H
GITR	13643-H08H	BTLA	11895-H02H	TIGIT	10917-H08H	CD155	10109-H02H
LAG3	16498-H02H	TIM-3	10390-H08H	CD137L	15693-H01H	CD137	10041-H08H

Hot Proteins

Journal	Authors	Targets	Catalog No.
Nat. Immunol.	CJ Chan et al.	CD155	10109-H02H
Mol Ther Nucleic Acids	Prodeus, A et al.	PD1	50124-M03H
J. Biol. Chem.	Wei, H et al.	CD155	10109-H02H
J. Biol. Chem.	S Hou et al.	CD155	10109-H02H
PLoS One.	Yi, L et al.	CD137	10041-H03H
J. Immunol.	K Kis-Toth et al.	2B4	10042-H02H
Immunology	C Cairo et al.	ICOS	11559-H02H
Protein Expression Purif.	JJ Drees et al.	PD-L1	50010-M08H
U.S. Patent	Govindan S V et al.	CTLA-4	11159-H03H

Immune Checkpoint Antibodies

Antibodies with Various Applications

FCM assay for PD-L1 antibody

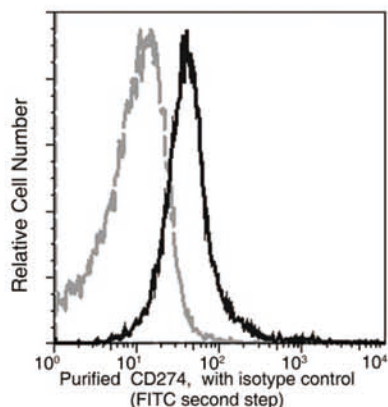


Fig. 3 Flow Cytometry analysis of PD-L1 antibody (50010-R401) reacting on mouse splenocytes.

IHC assay for PD1 antibody

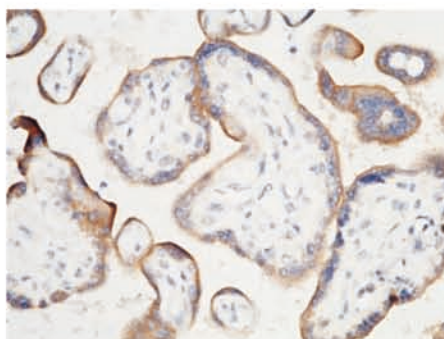


Fig. 4 Immunohistochemical analysis of paraffin-embedded human placenta using PD-L1 antibody (10084-R015) at 5µg/mL.

WB assay for CTLA-4 antibody



Fig. 5 Western Blot analysis of CTLA4 antibody (11159-RP02, 10 µg/mL) measured using MOLT-4 membrane cell lysate (30 µg/lane).

Hot Antibodies

Targets	Catalog No.	Product Name	Applications
PD-L1	10084-R015	PD-L1 / B7-H1 / CD274 Antibody, Rabbit MAb	ELISA, IHC-P
PD-L1	50010-R401	PD-L1 / B7-H1 / CD274 Antibody, Rabbit MAb	FCM
PD1	50124-RP02	PD1 / PDCD1 / CD279 Antibody, Rabbit PAb, Antigen Affinity Purified	ELISA, IHC-P
PD1	10377-R002	PD1 / PDCD1 Antibody, Rabbit MAb	ELISA
CD155	50259-R305	CD155 / PVR Antibody, Rabbit MAb	ICC/IF, IF, FCM
CD155	10109-R114	CD155 / PVR / NECL5 Antibody, Rabbit MAb	WB, ELISA, IP
CD40	10774-MM03	CD40 / TNFRSF5 Antibody, Mouse MAb	ICC/IF, IF, FCM
TIGIT	50939-T24	TIGIT / VSTM3 Antibody, Rabbit PAb, Antigen Affinity Purified	ELISA, IHC-P
CEACAM1	10822-R103-P	CEACAM1 / CD66a Antibody (PE), Rabbit MAb	FCM
CEACAM1	50571-R030	CEACAM1 / CD66a Antibody, Rabbit MAb	IHC-P
CD80	10698-T56	CD80 / B7-1 Antibody, Rabbit PAb, Antigen Affinity Purified	WB, ELISA, IHC-P
TIM-3	10390-R024	TIM-3 / HAVCR2 Antibody, Rabbit MAb	ELISA
VISTA	13482-T16	B7-H5 / GI24 / VISTA Antibody, Rabbit PAb, Antigen Affinity Purified	ELISA

Representative articles with using antibodies from Sino Biological Inc.

Journals	Authors	Targets	Catalog No.
Oncotarget	Du Z et al.	PD-L1	10084-R015
J Thorac Oncol.	Padda SK1 et al.	PD-L1	10084-R015
Clin Cancer Res	BJ Chen et al.	PD-L1	10084-R015
Hum Vaccin Immunother	Lijun Xiao et al.	PD1	50124-RP02
Hum Vaccin Immunother	Zhang Y et al.	PD1	50124-RP02

Immune Checkpoint Products in Sino Biological Inc.

—600 Proteins & Antibodies

Co-inhibitory Immune Checkpoint Targets

Targets	Proteins products available	Antibodies products available
PD1 / PDCD1 / CD279	H, M, CA, R, RH, CY	B/N, IHC, WB, E
PD-L1 / B7-H1 / CD274	H, M, CA, R, CY	B/N, FC, IHC, WB, E
B7-DC/PD-L2/CD273	H, M, R, CY	FC, WB, E
CTLA-4 / CD152	H, M, CA, R, CY	WB, E, IP
CD80 / B7-1	H, M, R, CY	FC, IHC, WB, E
CD86 / B7-2	H, M, R, CY	FC, WB, E, IP
B7-H3 / CD276	H, M, R, CY	FC, WB, E, IP, ICC, IF
B7-H4 / B7S1 / B7x	H, M, R	E, IHC
VISTA / B7-H5 / GI24	H, M, R, RH, CY	E
CEACAM1 / CD66a	H, M, R	FC, IHC, WB, E, ICC, IF
IDO1	H	ELISA
HVEM / TNFRSF14	H, M, CY	E
BTLA	H, M, R, RH	N/A
CD160	H, M, RH	FC, IHC, E
TIM-3 / HAVCR2	H, M, CY	WB, E, IP
SIRPalpha/CD172a	H, M, R	FC, WB, E, IHC, IP
CD47	H, R	WB, ELISA
2B4 / CD244	H	FC, WB, IP, E
CD48 / SLAMF2	H, M, R	FC, WB, E, IHC, IP

Co-stimulatory Immune Checkpoint Targets

Targets	Proteins products available	Antibodies products available
CD155 / PVR	H, M, R, RH	FC, WB, E, IP, ICC, IF
CD226 / DNAM-1	H, M, R	FC, E
OX40 / CD134	H, M, RH	WB, E
OX-40L/TNFSF4/CD252	H, CY	N/A
HVEM / TNFRSF14	H, M, CY	ELISA
TNFSF14/LIGHT/CD258	H	N/A
CD40L/CD154/TNFSF5	H, M, CA, R, RH	WB, E
CD40/TNFRSF5	H, M, CA, R, CY	FC, WB, E, IP, ICC, IF
CD28 / TP44	H, M, R, CY	FC, IHC, WB, E
CD80 / B7-1	H, M, R, CY	FC, IHC, WB, E
CD86 / B7-2	H, M, R, CY	FC, WB, E, IP
CD27	H, M, RH	FC, IHC, E, ICC, IF
CD70/CD27L/TNFSF7	H, M, R	N/A
ICOS Ligand / B7-H2	H, M, R, CY	FC, WB, E
ICOS/AILIM/CD278	H, M, R	N/A
CD137 / 4-1BB	H, M, CA, RH	E
4-1BBL / CD137L	H, M, R	FC, E, ICC, IF
LAG3/CD223/Lymphocyteactivationgene3	H, M, R	N/A
GITR/TNFRSF18	H, R	ELISA

Species: H-Human, M-Mouse, R-Rat, CA-Canine, RH-Rhesus, CY-Cynomolgus

Applications: E-ELISA, FC-Flow Cytometry, IHC-Immunohistochemistry, WB-Western Blot, ICC-Immunocytochemistry, IF-Immunofluorescence, IP-Immunoprecipitation

N/A: no products

See more, visit www.sinobiological.com/immune-checkpoint.html