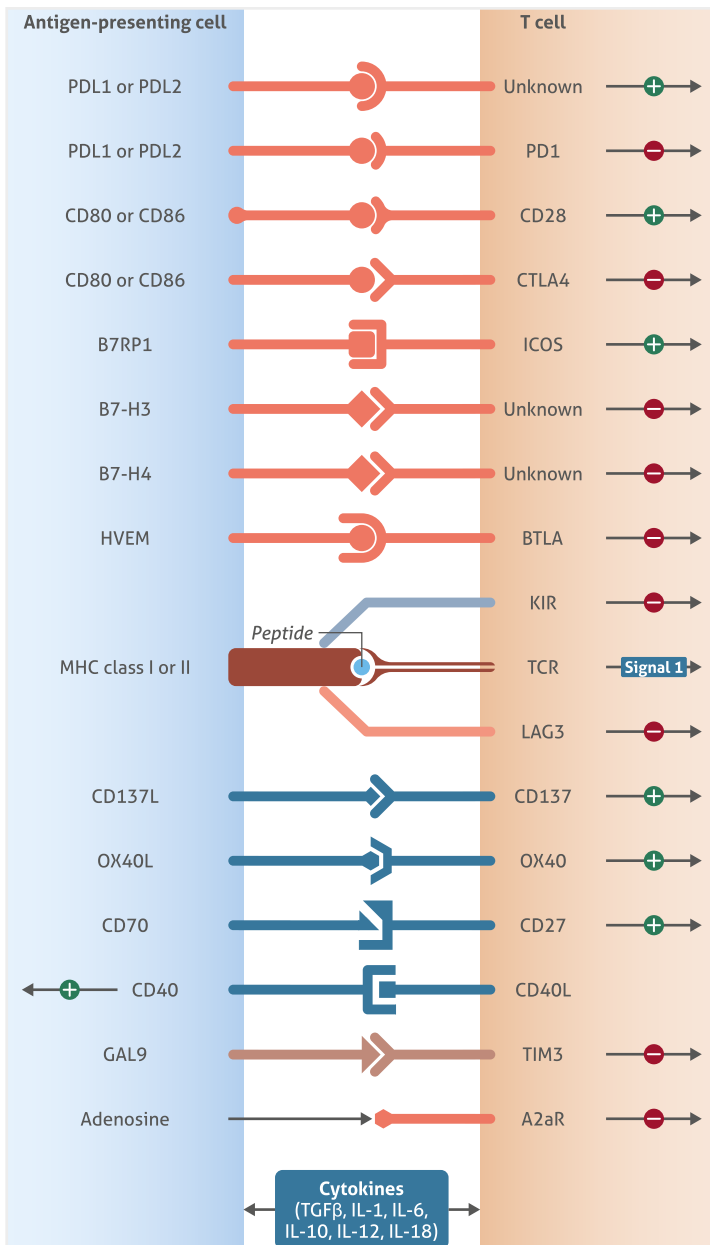


# ANTIBODIES FOR CANCER IMMUNOTHERAPY

[www.ptglab.com](http://www.ptglab.com)

## Immune Checkpoints In Cancer Immunotherapy



Reference: Nature Reviews Cancer 12, 252-264 (April 2012).

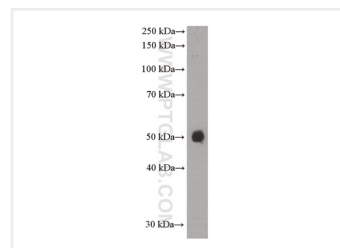
## Immune Checkpoint Proteins

Antigen-presenting cell	T cell	Response
PD-L1/PD-L2	Unknown	Co-stimulatory
PD-L1/PD-L2	PD-1	Co-inhibitory
CD80/CD86	CD28	Co-stimulatory
CD80/CD86	CTLA4	Co-inhibitory
B7RP1	ICOS	Co-stimulatory
B7-H3	Unknown	Co-inhibitory
B7-H4	Unknown	Co-inhibitory
Unknown	VISTA	Co-inhibitory
HVEM	BTLA	Co-inhibitory
HVEM	LIGHT	Co-stimulatory
MHC class II	LAG3	Co-inhibitory
CD137L	CD137	Co-stimulatory
OX40L	OX40	Co-stimulatory
CD70	CD27	Co-stimulatory
CD40	CD40L	Co-stimulatory
GAL9	TIM3	Co-inhibitory
GITRL	GITR	Co-stimulatory
CD155	DNAM-1	Co-stimulatory
CD155	TIGIT	Co-inhibitory

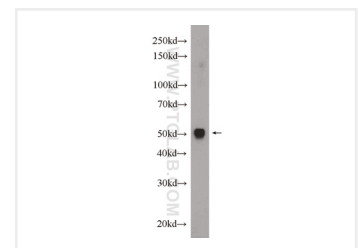
## PD-L1

Catalog Number: **66248-1-Ig**

Catalog Number: **17952-1-AP**



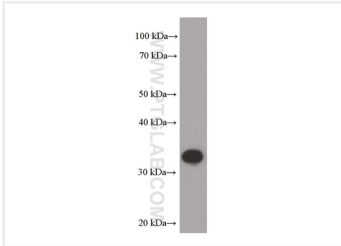
Human skeletal muscle tissue was subjected to SDS PAGE followed by western blot with PD-L1/CD274 antibody (66248-1-Ig) at a dilution of 1:1000.



Mouse heart tissue was subjected to SDS PAGE followed by western blot with PD-L1/CD274 antibody (17952-1-AP) at a dilution of 1:300.

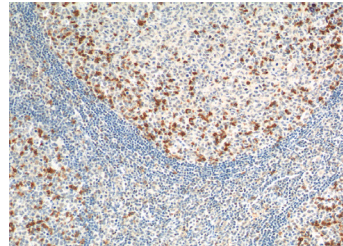
## PD-1

Catalog Number: **66220-1-Ig**



Raji cells were subjected to SDS PAGE followed by western blot with PD-1/CD279 antibody (66220-1-Ig) at a dilution of 1:1000.

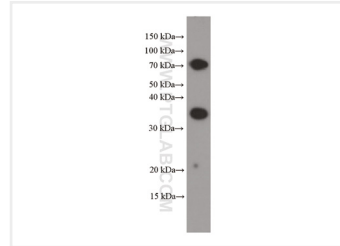
Catalog Number: **18106-1-AP**



Immunohistochemistry of paraffin-embedded human tonsillitis tissue slide using PD-1/CD279 (18106-1-AP) antibody at a dilution of 1:200 (10x objective). Heat-mediated antigen retrieved with Tris-EDTA buffer (pH9).

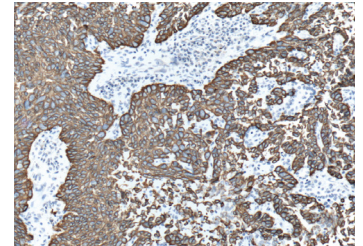
## TIM3

Catalog Number: **60355-1-Ig**



Daudi cells were subjected to SDS PAGE followed by western blot with TIM3 antibody (60355-1-Ig) at a dilution of 1:2000.

Catalog Number: **11872-1-AP**



Immunohistochemistry of paraffin-embedded human lung cancer tissue slide using TIM3 antibody (60355-1-Ig) at a dilution of 1:400 (10x objective). Heat-mediated antigen retrieved with Tris-EDTA buffer (pH9).

## Targets For Antibody Therapy Of Cancer

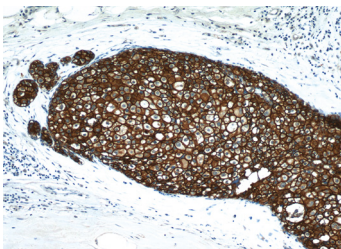
Antigen category	Examples of antigens
Hematopoietic differentiation antigens	CD20, CD30, CD33, CD52
Glycoproteins expressed by solid tumors	EpCAM, CEA, gpA33, Mucins, TAG-72, CAIX, PSMA, Folate-binding protein
Targets of anti-angiogenic mAbs	VEGF, VEGFR, Integrin $\alpha$ V $\beta$ 3, Integrin $\alpha$ 5 $\beta$ 1
Growth and differentiation signalling	EGFR, ERBB2, ERBB3, MET, IGF1R, EPHA3, TRAILR1, TRAILR2, RANKL
Stromal and extracellular matrix antigen	FAP, Tenascin
Immune-mediated tumor cell killing	CTLA4, PD-1, PD-L1

Since 1997, more than 10 antibodies have received approval from the FDA for the treatment of various solid tumors and hematological malignancies, such as monoclonal antibodies for ERBB2, VEGF, EGFR, CD20, CD30, CD33, CD52, CTLA4, PD-1, and PD-L1, and a large number of additional therapeutic antibodies are currently being tested in early-stage and late-stage clinical trials.

**Reference:** Nature Reviews Cancer 12, 278-287 (April 2012).

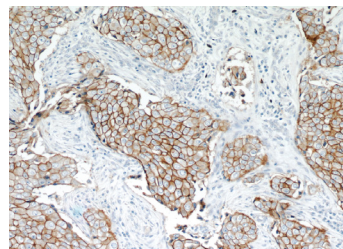
## HER2/ErbB2

Catalog Number: **60311-1-Ig**



Immunohistochemistry of paraffin-embedded human breast cancer tissue slide using ERBB2 antibody (60311-1-Ig) at a dilution of 1:200 (10x objective).

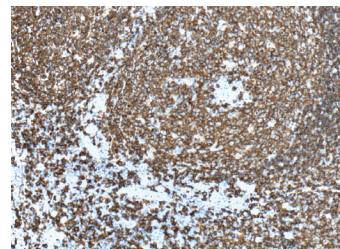
Catalog Number: **18299-1-AP**



Immunohistochemical of paraffin-embedded human breast cancer using ERBB2, p185-Specific antibody (18299-1-AP) at a dilution of 1:50 (10x objective).

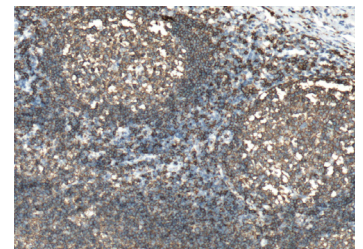
## CD20

Catalog Number: **60271-1-Ig**



Immunohistochemistry of paraffin-embedded human tonsillitis tissue slide using MS4A1, CD20 antibody (60271-1-Ig) at a dilution of 1:200 (10x objective). Heat-mediated antigen retrieved with Tris-EDTA buffer (pH9).

Catalog Number: **24828-1-AP**



Immunohistochemistry of paraffin-embedded human tonsillitis tissue slide using MS4A1, CD20 antibody (24828-1-AP) at a dilution of 1:200 (40x objective). Heat-mediated antigen retrieved with Tris-EDTA buffer (pH9).