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PD L1 Monoclonal Antibody (PDL1)

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AW5698

Specification

PD L1 Monoclonal Antibody (PDL1) - Product Information

Application	**WB, IHC-P, FC, IHC-P-Leica,E**
Primary Accession	Q9NZQ7
Reactivity	**Human**
Predicted	**Human**
Host	**Mouse**
Clonality	**monoclonal**
Isotype	**IgG1**
Antigen Source	**HUMAN**

PD L1 Monoclonal Antibody (PDL1) - Additional Information

Gene ID 29126

Other Names
Programmed cell death 1 ligand 1, PD-L1, PDCD1 ligand 1, Programmed death ligand 1, B7 homolog 1, B7-H1, CD274, CD274, B7H1, PDCD1L1, PDCD1LG1, PDL1, PDL-1

Dilution
WB~~1:500-1:1000
IHC-P~~1:100
FC~~1:25
IHC-P-Leica~~1:100-1:600

Target/Specificity
This PD L1 antibody is generated from a mouse immunized with a KLH conjugated synthetic peptide between 256-290 amino acids from the human region of human PD L1.

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PD L1 Monoclonal Antibody (PDL1) is for research use only and not for use in diagnostic or therapeutic procedures.

PD L1 Monoclonal Antibody (PDL1) - Protein Information

Name CD274 (HGNC:17635)

Function
Plays a critical role in induction and maintenance of immune tolerance to self (PubMed:11015443, PubMed:28813410, PubMed:28813417, PubMed:31399419). As a ligand for the inhibitory receptor PDCD1/PD-1, modulates the activation threshold of T-cells and limits T-cell effector response (PubMed:11015443, PubMed:28813410, PubMed:28813417, PubMed:36727298). Through a yet unknown activating receptor, may costimulate T-cell subsets that predominantly produce interleukin-10 (IL10) (PubMed:10581077). Can also act as a transcription coactivator: in response to hypoxia, translocates into the nucleus via its interaction with phosphorylated STAT3 and promotes transcription of GSDMC, leading to pyroptosis (PubMed:32929201).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Early endosome membrane; Single-pass type I membrane protein. Recycling endosome membrane; Single-pass type I membrane protein. Nucleus. Note=Associates with CMTM6 at recycling endosomes, where it is protected from being targeted for lysosomal degradation (PubMed:28813417). Translocates to the nucleus in response to hypoxia via its interaction with phosphorylated STAT3 (PubMed:32929201). [Isoform 2]: Endomembrane system; Single-pass type I membrane protein

Tissue Location
Highly expressed in the heart, skeletal muscle, placenta and lung. Weakly expressed in the thymus, spleen, kidney and liver. Expressed on activated T- and B-cells, dendritic cells, keratinocytes and monocytes.

PD L1 Monoclonal Antibody (PDL1) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PD L1 Monoclonal Antibody (PDL1) - Images

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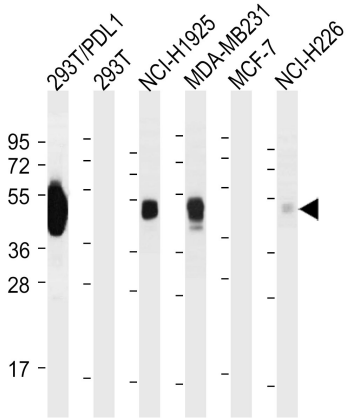
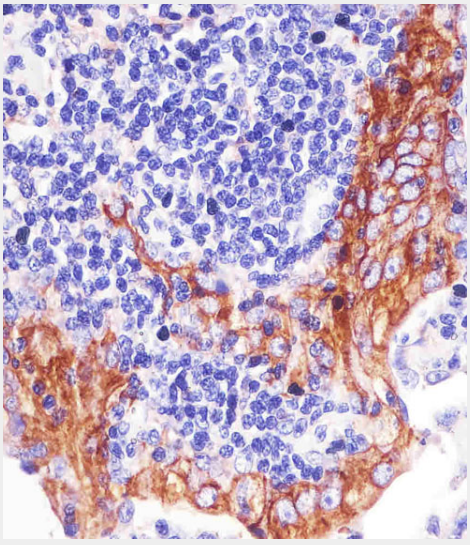
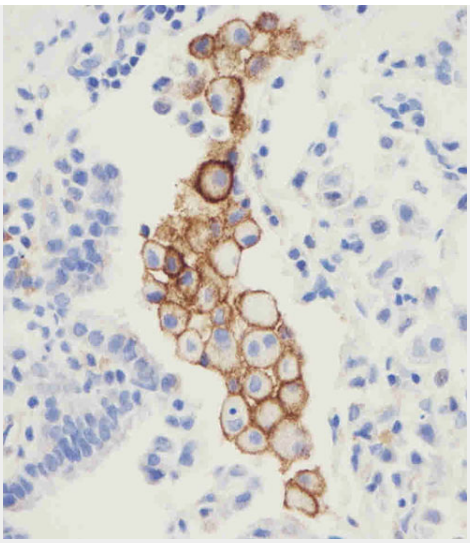


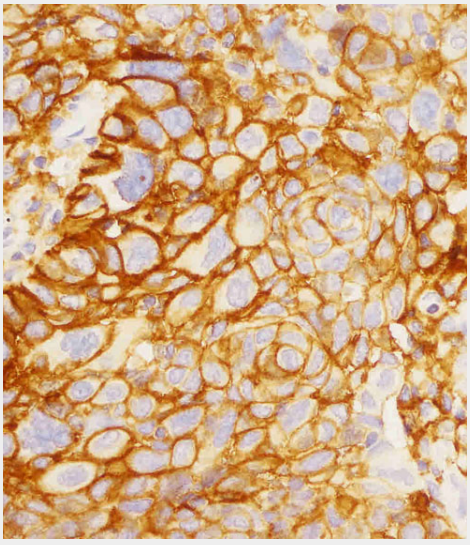
All lanes : Anti-PDL-1 Antibody at 0.5-1µg/ml dilution Lane 1: 293T/PDL1 whole cell lysate Lane 2: 293T whole cell lysate Lane 3: NCI-H1975 whole cell lysate Lane 4: MDA-MB231 whole cell lysate Lane 5: MCF-7 whole cell lysate Lane 6: NCI-H226 whole cell lysate Lysates/proteins at 30 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L),Peroxidase conjµgated at 1/5000 dilution. Predicted band size : 32 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



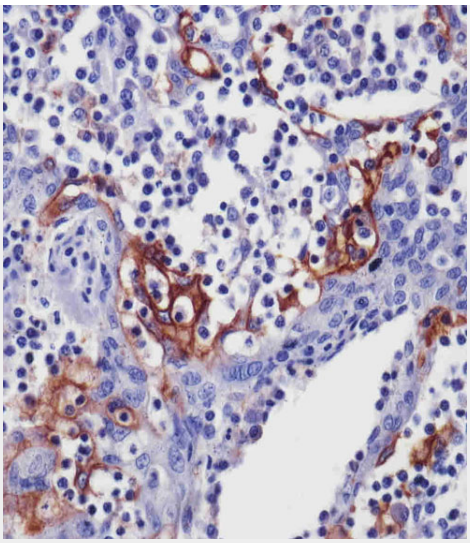
Immunohistochemical analysis of PDL-1 in human non-small cell lung carcinoma sections(IHC-P - paraformaldehyde-fixed, paraffin-embedded sections) by abgent test. Tissue was fixed with formaldehyde; antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (0.85µg/ml) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



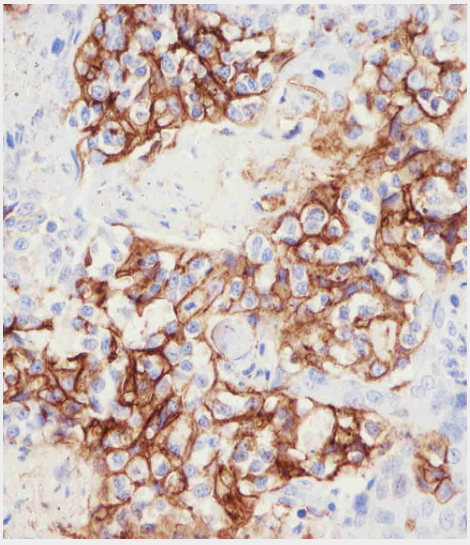
Immunohistochemical analysis of PDL-1 in human non-small cell lung carcinoma sections(IHC-P - paraformaldehyde-fixed, paraffin-embedded sections) by Dako test. Tissue was fixed with formaldehyde; antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (0.85µg/ml) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



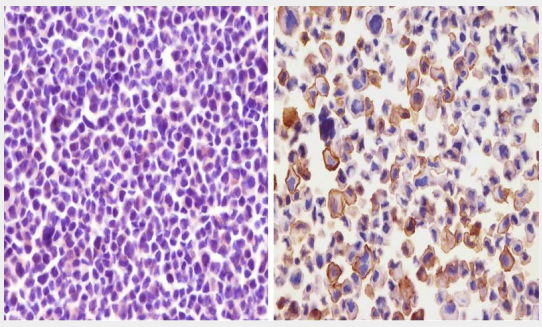
Immunohistochemical analysis of PDL-1 in human non-small cell lung carcinoma sections(IHC-P - paraformaldehyde-fixed, paraffin-embedded sections) by Leica test. Tissue was fixed with formaldehyde; antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (0.85µg/ml) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



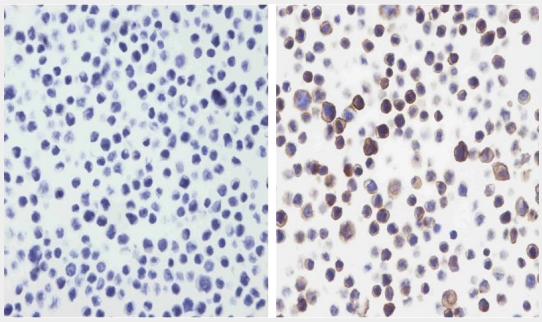
Immunohistochemical analysis of PDL-1 in human tonsil tissue sections(IHC-P - paraformaldehyde-fixed, paraffin-embedded sections) by abgent test. Tissue was fixed with formaldehyde; antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (0.85µg/ml) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



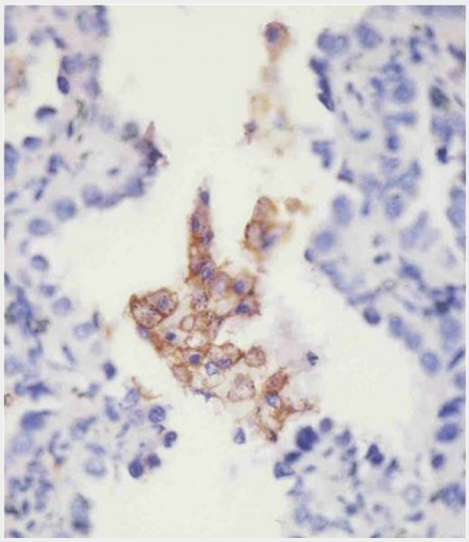
Immunohistochemical analysis of PDL-1 in human tonsil tissue sections(IHC-P - paraformaldehyde-fixed, paraffin-embedded sections) by Dako test. Tissue was fixed with formaldehyde; antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (0.85µg/ml) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Immunohistochemical analysis of PDL-1 in MCF-7 cell (left) and NCI-H226（right） cell sections by abgent test . Cell was fixed with formaldehyde and blocked with super block for 10 minutes at room temperature; antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (0.85µg/ml) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Immunohistochemical analysis of PDL-1 in untransfected(left) or transfected(right) with 293T cell sections by abgent test . Cell was fixed with formaldehyde; antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (0.85µg/ml) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



AW5698 staining PD-L1 in human lung squamous carcinoma sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

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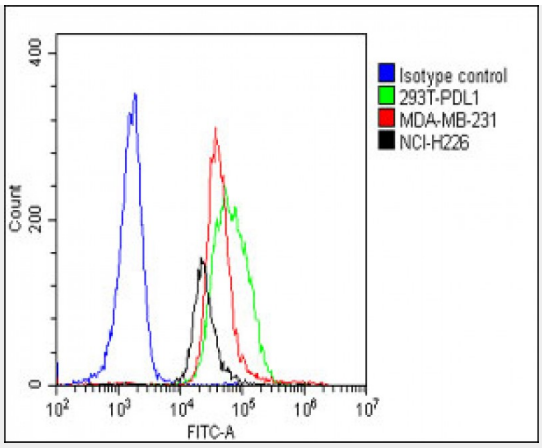
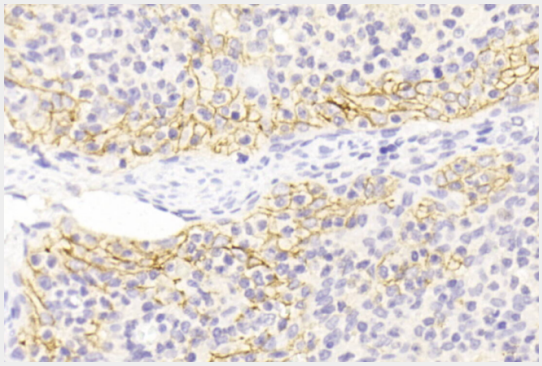


Overlay histogram showing isotype control(blue line), 293T-PDL1(green line), MDA-MB-231(red line), NCI-H226(black line) cells stained with PD L1 Antibody. The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(NH174309) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was Mouse IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Immunohistochemical analysis of paraffin-embedded Human tonsil section using PDL1(Cat#AW5698). AW5698 was diluted at 1:500 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

PD L1 Monoclonal Antibody (PDL1) - Background

Involved in the costimulatory signal, essential for T- cell proliferation and production of IL10 and IFNG, in an IL2- dependent and a PDCD1-independent manner. Interaction with PDCD1 inhibits T-cell proliferation and cytokine production.

PD L1 Monoclonal Antibody (PDL1) - References

Dong H.,et al.Nat. Med. 5:1365-1369(1999).
Freeman G.J.,et al.J. Exp. Med. 192:1027-1034(2000).
He X.-H.,et al.Acta Pharmacol. Sin. 26:462-468(2005).
Chi X.-Y.,et al.Submitted (NOV-2005) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

PD L1 Monoclonal Antibody (PDL1) - Citations

- Association of PD-L1 expression with survival benefit from PD-1/PD-L1 inhibitors in advanced cancer: Systematic review and meta-analysis of phase III randomized clinical trials
- Isoindoline scaffold-based dual inhibitors of HDAC6 and HSP90 suppressing the growth of

lung cancer in vitro and in vivo
- N-alkyl-hydroxybenzoyl anilide hydroxamates as dual inhibitors of HDAC and HSP90, downregulating IFN-γ induced PD-L1 expression