

**Recombinant PD-L1 antibody [AK94]
Rabbit Monoclonal Antibody (Mab)
Catalog # AP80079**

Specification

Recombinant PD-L1 antibody [AK94] - Product Information

Application	IHC-P,E
Primary Accession	O9NZQ7
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	33275

Recombinant PD-L1 antibody [AK94] - 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

Target/Specificity

Recombinant anti-PD-L1 monoclonal antibody recognizes endogenous levels of total PD-L1 protein.

Dilution

IHC-P~~1:1000

Format

Purified recombination monoclonal antibody supplied in PBS with 0.05% (W/V) Proclin300, and 0.05% BSA. This antibody is purified through a protein A column.

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

Recombinant PD-L1 antibody [AK94] is for research use only and not for use in diagnostic or therapeutic procedures.

Recombinant PD-L1 antibody [AK94] - 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

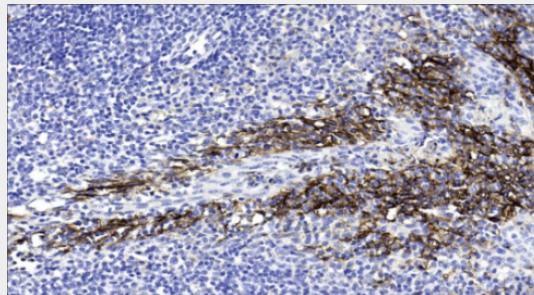
Highly expressed in the heart, skeletal muscle, placenta and lung. Weakly expressed in the thymus, spleen, kidney and liver. Expressed on activated T- and B-cells, dendritic cells, keratinocytes and monocytes.

Recombinant PD-L1 antibody [AK94] - Protocols

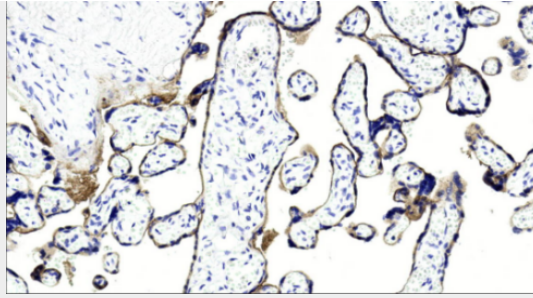
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

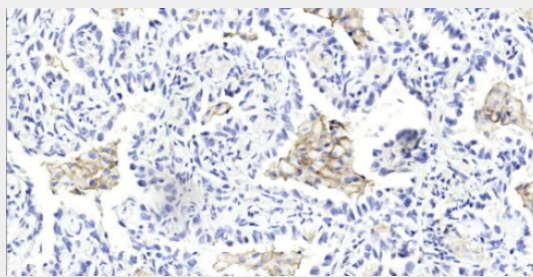
Recombinant PD-L1 antibody [AK94] - Images



Immunohistochemical analysis of paraffin-embedded human tonsil tissue using AP80079 performed on the Abcarta® FAIP-48 Fully automated IHC platform. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody for 15 min at room temperature. AmpSee™ Detection Systems [Abcepta:ADR005] was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded human placenta tissue using AP80079 performed on the Abcarta® FAIP-48 Fully automated IHC platform. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH 9.0). Samples were incubated with primary antibody for 15 min at room temperature. AmpSee™ Detection Systems [Abcepta:ADR005] was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue using AP80079 performed on the Abcarta® FAIP-48 Fully automated IHC platform. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH 9.0). Samples were incubated with primary antibody for 15 min at room temperature. AmpSee™ Detection Systems [Abcepta:ADR005] was used as the secondary antibody.

Recombinant PD-L1 antibody [AK94] - Background

Programmed cell death 1 ligand 1 (PD-L1, B7-H1, CD274) is a member of the B7 family of cell surface ligands that regulate T cell activation and immune responses. The PD-L1 ligand binds the PD-1 transmembrane receptor and inhibits T cell activation. PD-L1 was discovered following a search for novel B7 protein homologs and was later shown to be expressed by antigen presenting cells, activated T cells, and tissues including placenta, heart, and lung. Similar in structure to related B7 family members, PD-L1 protein contains extracellular IgV and IgC domains and a short, cytoplasmic region. Research studies demonstrate that PD-L1 is expressed in several tumor types, including melanoma, ovary, colon, lung, breast, and renal cell carcinomas. Expression of PD-L1 in cancer is associated with tumor-infiltrating lymphocytes, which mediate PD-L1 expression through the release of interferon gamma. Additional research links PD-L1 expression to cancers associated with viral infections. 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.

Recombinant PD-L1 antibody [AK94] - 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).
- Dong, H. et al. (1999) Nat Med 5, 1365-9.
- Freeman, G.J. et al. (2000) J Exp Med 192, 1027-34.
- Liang, S.C. et al. (2003) Eur J Immunol 33, 2706-16.

Dong, H. et al. (2002) Nat Med 8, 793-800.
Thompson, R.H. et al. (2006) Cancer Res 66, 3381-5.
Pardoll, D.M. (2012) Nat Rev Cancer 12, 252-64.
Taube, J.M. et al. (2012) Sci Transl Med 4, 127ra37.
Lyford-Pike, S. et al. (2013) Cancer Res 73, 1733-41.
Chen, B.J. et al. (2013) Clin Cancer Res 19, 3462-73.
Wimberly, H. et al. (2014) Cancer Immunol Res , .