Anti-PD-L1 / DIA-PDL1-OD
Mouse monoclonal anti-cancer cell marker
Clone JAL1

Product Information

Catalog No.:	**DIA-PDL1-OD**
Clone:	JAL1
Isotype	Rabbit IgG
Quantity	100µl
Specificity:	PD-L1
Physical State:	Liquid
Species Reactivity:	Human
Positive Control:	Tonsil
Visualization:	Membranous

Presentation:	Purified antibody in Tris pH 7.3-7.7 with 1% BSA, <0.1% NaN3
Applications:	Immunohistochemistry (IHC), standard formalin-fixed paraffin sections
Dilutions:	1:100 - 1:200 IHC-P

(General recommendation, validation of antibody performance/protocol is the responsibility of the end user. Positive/negative controls should be run simultaneously with patient specimen. Interpretation must be made by a qualified pathologist within the context of patient's clinical history/other diagnostic tests.)

Reactivity

Clone JAL1 has been developed specifically for routine immunohistochemical (IHC) detection of PD-L1 in formalin-fixed paraffin-embedded tissue specimen. Moreover, JAL1 has been validated for the identification of PD-L1-positive macrophages and tumor tissues under pathological conditions.
PD-L1, also known as CD274 or B7 homolog 1 (B7-H1) is highly expressed in the heart, skeletal muscle, placenta and lung and weakly expressed in the thymus, spleen, kidney and liver. PD-L1 is expressed on macrophages and activated T- and B-cells, dendritic cells, keratinocytes and monocytes.
Moreover, several human cancer cells express PD-L1 at high levels. Binding of PD-L1 with its receptor PD-1 on T cells inhibits t cell proliferation and the production of cytokines, such as interleukin (IL)-2. It has been shown that PD-L1 helps tumor cells to evade anti-tumor immunity and blockade of PD-L1 reduces the growth of tumors in the presence of immune cells.
PD-L1 is commonly over expressed on tumor cells or on non-transformed cells in the tumor microenvironment2. PD-L1 expressed on the tumor cells binds to PD-1 receptors on the activated T cells, which leads to the inhibition of the cytotoxic T cells. These deactivated T cells remain inhibited in the tumor microenvironment.
PD-1 and PD-L1/PD-L2 belong to the family of immune checkpoint proteins that act as co-inhibitory factors, which can halt or limit the development of the T cell response.

Instructions for Use

Immunohistochemical staining of standard formalin-fixed paraffin sections

Deparaffinize and rehydrate according to standard procedures. Heat induced epitope retrieval (HIER) is required (pH 9-10 for 10-30 minutes). For immunohistochemical detection different techniques can be used: indirect immunoenzyme labeling with a secondary antibody conjugate, biotin/(strept)avidin-based detection, soluble enzyme immune complex or polymer-based detection. The antibody can be adapted for use on automated staining instruments.

Intented use / regulatory status

Europe: For in Vitro Diagnostic Use / All other countries: For Research Use only

Storage and Stability

Store at 2-8°C. Do not freeze. The antibody is stable until the date indicated on the label, when stored properly.

Safety Notes

The material contains <1% sodium azide as preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material. Avoid skin and eye contact, inhalation and ingestion.

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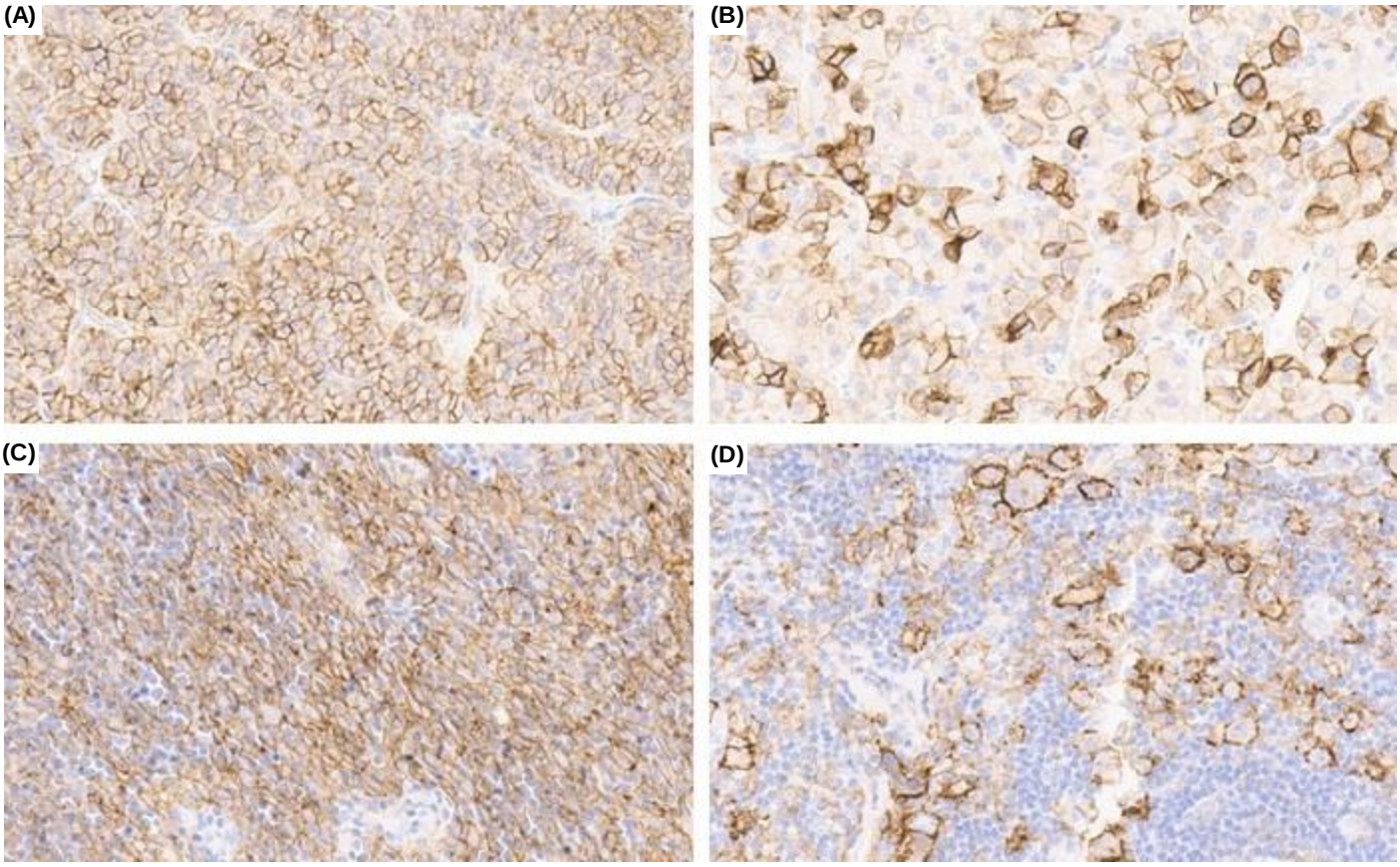
Figures

Immunohistochemistry of human PD-L1 in routine formalin-fixed paraffin-embedded tissue samples

A: Strong PD-L1 positivity in >90% of the cells of a thyroid adenoma.
B: Strong focal PD-L1 positivity in a kidney oncocytoma (mosaic pattern).
C: Thymoma with strong PD-L1 expression in epithelial cells
D: PD-L1 positive Hodgkin's lymphoma with predominant staining of Hodgkin and Reed-Sternberg cells.



(pictures courtesy of Prof. Guido Sauter, Department of Pathology, University Hospital Eppendorf, Hamburg, Germany)

References

1. O'Malley DP et al. Immunohistochemical detection of PD-L1 among diverse human neoplasms in a reference laboratory: observations based upon 62,896 cases. *Modern Pathology* (2019) 32:929–942
2. Büttner R et al. Programmed death-ligand 1 immunohistochemistry testing: a review of analytical assays and clinical implementation in non-small-cell lung cancer. *J Clin Oncol.* (2017) 35:3867–3876
3. Rimm DL et al. A prospective, multi-institutional, pathologist-based assessment of 4 immunohistochemistry assays for PD-L1 expression in non-small cell lung cancer. *JAMA Oncol.* (2017) 3:1051–1058
4. Milne CP et al. Complementary versus companion diagnostics: apples and oranges? *Biomark Med.* (2015) 9:25–34
5. Ott PA et al. CTLA-4 and PD-1/PD-L1 blockade: new immunotherapeutic modalities with durable clinical benefit in melanoma patients. *Clin Cancer Res.* (2013) 19:5300–5309
6. Pardoll DM. The blockade of immune checkpoints in cancer immunotherapy. *Nat Rev Cancer.* (2012) 12:252–264.
7. Yokosuka T et al. Programmed cell death 1 forms negative costimulatory microclusters that directly inhibit T cell receptor signaling by recruiting phosphatase SHP2. *J Exp Med.* (2012) 209:1201–1217