

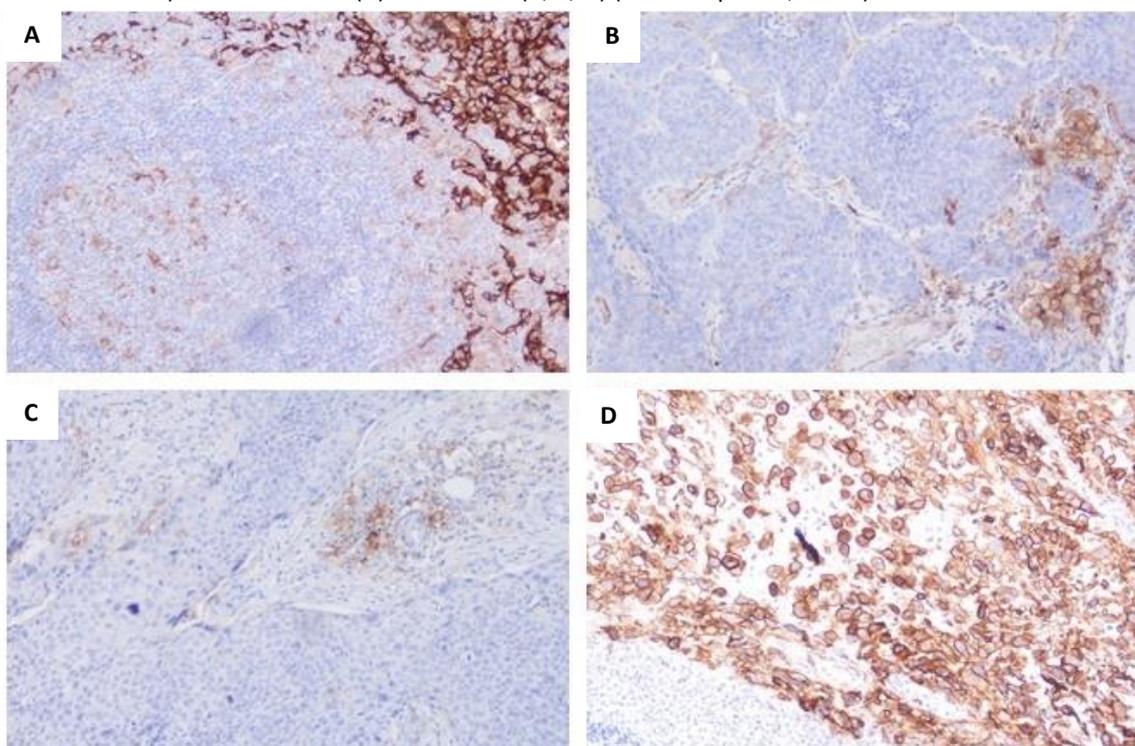
# PD-L1 (programmed cell death ligand 1) antibody (clone HL1041)

## General Information

|                        |                    |                            |  |
|------------------------|--------------------|----------------------------|--|
| <b>Catalog Number:</b> | <b>IHC-184010</b>  | <b>Host:</b>               | Rabbit   |
| <b>Quantity:</b>       | 100 µl             | <b>Clonality:</b>          | Monoclonal, clone HL1041   |
| <b>Concentration:</b>  | 1mg/ml             | <b>Isotype:</b>            | IgG  |
| <b>Form:</b>           | Liquid             | <b>Application:</b>        | IHC-P, WB  |
| <b>Buffer:</b>         | PBS                | <b>Suggested dilution:</b> | IHC-P 1:100-1:200; WB: 1:500-1:3000  |
| <b>Preservative:</b>   | No Preservative    | <b>Specificity:</b>        | PD-L1, no cross reactivity with PD-L2  |
| <b>Purification:</b>   | Protein A affinity | <b>Immunogen:</b>          | Carrier-protein conjugated synthetic peptide encompassing a sequence within the C-terminus region of human PD-L1. The exact sequence is proprietary. |
| <b>Conjugation:</b>    | Unconjugated       |                            |  |

## Figures

Immunohistochemistry of PD-L1 clone HL1041 in formalin-fixed paraffin-embedded human tonsil and HNSCC (head and neck squamous cell carcinoma) sections: Tonsil (A) and HNSCC (B, C, D) (10' HIER pH 6.0, 1:200)



(Pictures courtesy of D. Dietrich, Department of Otorhinolaryngology, University Medical Center Bonn (UKB), Germany)

This product is for In Vitro experimental use only. Not for Therapeutic or Diagnostic use.

### Manufacturer

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## Reactivity

This antibody detects human PD-L1, but does not cross-react with PD-L2 proteins. Clone HL1041 has been validated for the specific detection of PD-L1 in paraffin-embedded human tissue specimen by routine immunohistochemistry.

## Background

Alongside the importance in routine pathology, PD-L1 is being investigated as a possible predictive marker for immune therapy and plays a central role for basic research of the tumor microenvironment and the cancer immunology checkpoint.

PD-L1 is expressed in various human tumors with highest frequencies in head and neck, cervical, glioblastoma multiforme (GBM), bladder, esophageal, (triple-negative) breast cancer, hepatocarcinoma and CUP (Cancer of Unknown Primary) cancer. PD-L1 expression is associated with tumor grade, squamous histology, immune cell density.

Physically, PD-L1 acts as the major ligand for PD-1 (Programmed cell death-1). PD-1 is a co-inhibitory receptor expressed on lymphoid and non-lymphoid-derived cells that negatively regulates peripheral T-cell responses. Activated T cells have the ability to recognize and bind cancer cells. The bound effector T cells release cytotoxins, which induce apoptosis in cancer cells.

PD-L1 expressed on tumor cells binds to PD-1 receptors on the activated T cells, which leads to the inhibition of the cytotoxic T cells and deactivated T cells remain inhibited in the tumor microenvironment. Thus, the PD-1/PD-L1 pathway represents an adaptive immune resistance mechanism exerted by tumor cells to escape immune response.

New therapies blocking PD1/PD-L1 interaction have revolutionized cancer immune therapy. Monoclonal antibody therapies against PD-1 and PD-L1 are being routinely used including:

Nivolumab, an anti-PD-1 drug developed by Bristol-Myers Squibb, approved for previously treated metastatic melanoma and squamous non-small cell lung cancer.

Pembrolizumab, developed by Merck is approved for previously treated metastatic melanoma.

PD-L1 is being investigated as a possible predictive marker for anti-PD-1 therapy.

## Storage

Store as concentrated solution. Centrifuge briefly prior to opening vial. For short-term storage (1-2 weeks), store at 4°C. For long-term storage, aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles.

## Application Note

For laboratory use only.

Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

## Disclaimer

This product is warranted to perform in conformance with product specifications and to be free from defects in material and workmanship. Products are supplied for research use only. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated, this warranty is limited to one year from date of shipment when the product is subjected to normal, proper and intended usage. Buyer's exclusive remedy for non-conforming products during the warranty period is limited to replacement of or refund for the non-conforming product(s). There is no obligation to replace products as the result of accident or disaster or inappropriate use of the products in a manner for which they were not designed, or improper storage and handling of the products.

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