Anti-PD-L1 Antibody [PD00-97] - BSA and Azide free

HA751015

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	IHC-P, IF-Cell
Molecular Wt:	Predicted band size: 33 kDa
Clone number:	PD00-97

Description: PD-L1 (programmed-death ligand 1; CD274), is a transmembrane protein constitutionally expressed on a variety of cell types, including antigen presenting cells (dendritic cells and histiocytes) and some non-lymphoid tissues (heart and lung). Binding of PD-L1 to PD-1 (programmed-death 1; CD279) expressed by activated T-cells, inhibits their function, causing negative feedback control of immunological reactions, thus impeding inflammation and autoimmunity. Tumour cells may express PD-L1, which binds to PD-1 allowing cancer cells to evade the attack of T-cells. Blockade of the PD-1/PD-L1 pathway has now shown useful in therapy of multiple cancer types, causing durable tumour regressions in a substantial proportion of otherwise treatment refractory cases of melanoma, and carcinomas of e.g., lung, kidney, and urinary tract. Patients without tumour PD-L1 expression can also derive benefit from blocking agents (studies across multiple cancer types demonstrate a pooled response rate of 48% in patients with PD-L1-positive tumours compared to 15% in PD-L1-negative tumours). Tonsil and placenta can be used as positive and negative tissue controls. However, tonsil is found to be superior to placenta, as tonsil displayes a range of PD-L1 expression levels. Tonsil displayes the following reaction pattern: No staining reaction in the vast majority of lymphocytes including mantle zone and germinal centre B-cells, no staining reaction in superficial epithelial cells, a weak to moderate, typically punctuated membranous staining reaction of the majority of germinal centre macrophages and finally a moderate to strong staining reaction of the majority of epithelial crypt cells.

Immunogen:	Recombinant protein with Human PD-L1 aa 19-238.
Positive control:	Human lung adenocarcinoma tissue, U-87 MG.
Subcellular location:	Cell membrane, Early endosome membrane, Recycling endosome membrane, Nucleus.
Database links:	SwissProt: Q9NZQ7 Human
Storage Buffer:	1*PBS (pH7.4).
Storage Instruction:	Store at 2-8℃. Avoid freeze.
Purity:	Protein A affinity purified.

Images

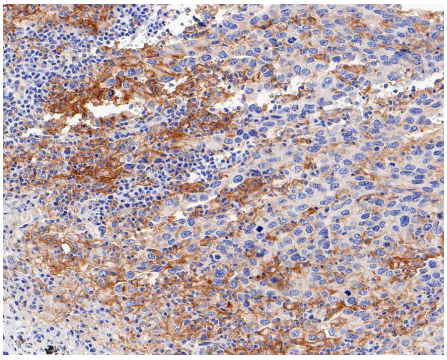

Fig1: This data was developed using HA722300, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human lung adenocarcinoma tissue with Rabbit anti-PD-L1 antibody (HA722300) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722300) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

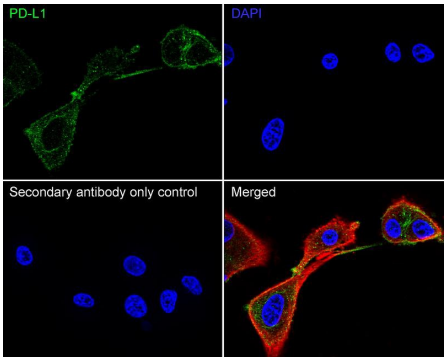

Fig2: This data was developed using HA722300, the same antibody clone in a different buffer formulation.
Immunocytochemistry analysis of U-87 MG cells labeling PD-L1 with Rabbit anti-PD-L1 antibody (HA722300) at 1/2,000 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-PD-L1 antibody (HA722300) at 1/2,000 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Lei Q et al. Resistance Mechanisms of Anti-PD1/PDL1 Therapy in Solid Tumors. Front Cell Dev Biol. 2020 Jul
2. Tamene W et al. PDL1 expression on monocytes is associated with plasma cytokines in Tuberculosis and HIV. PLoS One. 2021 Oct