

Datasheet for JOT0002-5

Anti-PD-L1 VHH Antibody

BASIC INFORMATION

Name	Anti-PD-L1 VHH Antibody
Specificity	Programmed Death-Ligand 1 (PD-L1)
Species Reactivity	Human, <i>Cynomolgus macaques</i>
Description	Alpaca derived anti-PD-L1 VHH single domain antibody (molecular weight: 14.8 kDa), expressed in <i>E. coli</i> under conditions free from animal derived components
Conjugate and tags	Un-conjugated; with a 6*His tag at its C-terminal
Tested Applications	ELISA, WB, IHC, IF
Purification	Affinity chromatography purified via Ni-charged resin
Format	Liquid
Product buffer solution	25 mM TAPS pH8.5, 500 mM NaCl, 5 mM EDTA, 0.1% Proclin 300 Solution
Storage	4°C; Do not freeze.
Analyte description	PD-L1, also known as CD274 or B7H1, stands for programmed cell death ligand 1. It is a type I transmembrane protein that is thought to repress immune responses by binding to its receptor (PD1), thus inhibiting T-cell activation, proliferation, and cytokine production. It contains V-like and C-like immunoglobulin domains. PD-L1 expression is regulated by various cytokines, such as TNF- α or LPS (ISSN: 1848-7718). Increased expression of this protein in certain types of cancers, e.g., renal cell carcinoma or colon cancer, correlates with poor prognosis.

PARAMETERS TESTED ON EACH LOT

Product concentration	1 mg/mL by Nanodrop
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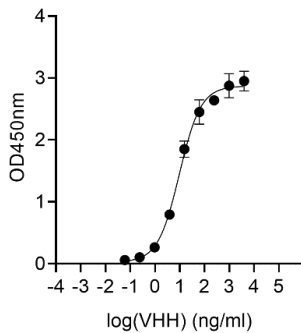
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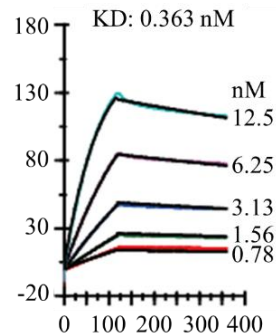
Purity	≥95% (4-12% gradient SDS-PAGE)
Affinity constant	KD of 0.363 nM by Biacore T200
Positive controls	Positive ELISA detected in: recombinant full-length human and <i>Cynomolgus macaques</i> PD-L1 proteins Positive WB detected in: PD-L1 stable expressing PLC/PRF/5 cells Positive FC detected in: PD-L1 stable expressing PLC/PRF/5 cells Positive IHC detected in: human tonsillitis tissue, human lung cancer tissue Positive IF detected in: MCF-7 cells
Recommended dilutions	ELISA 1:10000-1:100000 WB 1:1000-1:2000 FC: 1:50-1:100 IHC 1:200-1:800 IF 1:200-1:800
Material safety note	This product is sold for research use only . Standard Laboratory Practices should be followed when handling this material.

SELECTED VALIDATION DATA

ELISA



SPR



Indirect ELISA showing anti-PD-L1 VHH antibody (JOT0002-5) binding to purified PD-L1. Plates were coated with 200ng/well-purified protein and the binding of JOT0002-5 was assessed in serial dilution from 0.06ng/ml primary antibody in triplicate.

Captured human PD-L1 on CM5 Chip can bind anti-PD-L1 VHH antibody (JOT0002-5) with an affinity constant of 0.363 nM as determined in SPR assay (Biacore T200).

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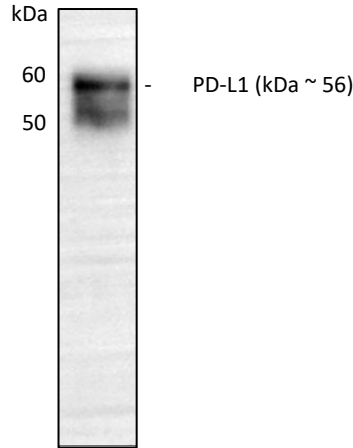
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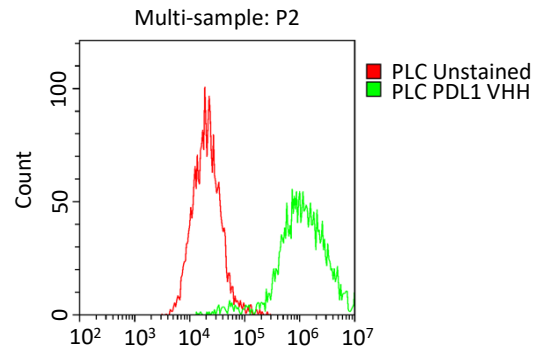
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WB



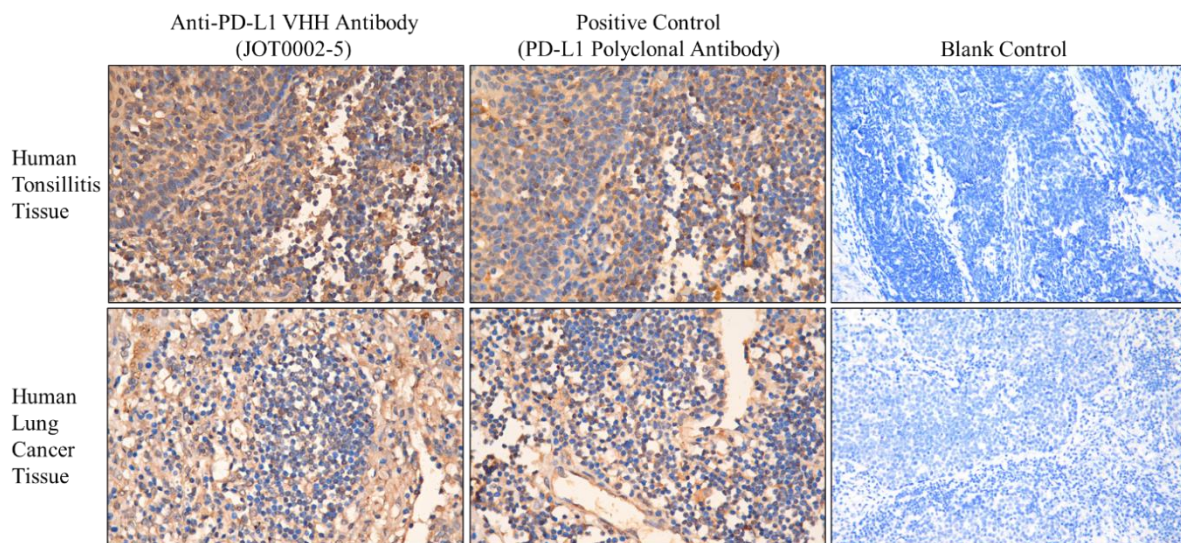
FC



Lysates (30 µg) were subjected to SDS-PAGE followed by western blot with anti-PDL1 VHH antibody (JOT0002-5) at dilution of 1:1000 incubated overnight at 4°C.

PD-L1 stable expressing PLC/PRF/5 cells were stained with anti-PDL1 VHH antibody (JOT0002-5) at a dilution of 1:50 followed by Rabbit Anti-Camelid VHH Cocktail secondary antibody [iFluor 488] at 1:1000 dilution.

IHC



Immunohistochemical analysis of paraffin-embedded human tonsillitis tissue and human lung cancer tissue slides using anti-PD-L1 VHH antibody (JOT0002-5) at 2.5µg/ml and positive control (PD-L1 polyclonal antibody, a competitor product) at 1:500 dilution (under 40x lens), respectively. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

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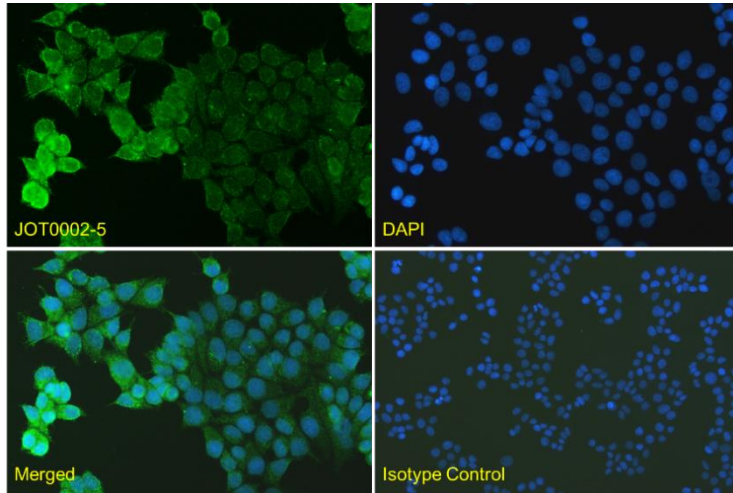
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IF



Immunofluorescence analysis of paraformaldehyde fixed MCF-7 cells stained with anti-PD-L1 VHH antibody (JOT0002-5) at 2.5 µg/ml followed by CoraLite® 488 secondary antibody at 1:200 dilution, showing cytoplasmic staining (under 40x lens). The nuclear stain is DAPI (blue). The isotype control was stained with anti-unknown antibody followed by CoraLite® 488 secondary antibody (under 20x lens).

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