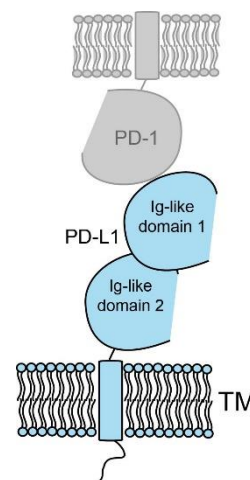


Programmed Death Ligand 1 (PD-L1)

Catalogue no.: Q89
Clone name: QL1-1B8
Product: VHH directed against Programmed Death Ligand 1 (PD-L1)

Target: Human B7 homolog 1 (B7-H1), also called programmed death ligand 1 (PD-L1) (UniProtKB [Q9NNZQ7](#)), is one of two ligands for programmed death-1 (PD-1), a member of the CD28 family of immunoreceptors.² PD-L1 is a member of the B7 family of immune proteins that can either stimulate or inhibit T cell activity.¹ Other family members include B7-1, B7-2, B7-H2, PD-L2 and B7-H3. B7 proteins have short cytoplasmic domains and 2 Ig-like domains in their extracellular domain.^{1,6} PD-L1 expression is upregulated in a small fraction of activated T and B cells and a much larger fraction of activated monocytes. PD-L1 is also found overexpressed in many cancers.⁵ Interaction of PD-L1 with PD-1 results in inhibition of TCR-mediated proliferation and cytokine production.¹⁻³ The PD-L1:PD-1 pathway is involved in the negative regulation of immune responses and may regulate immune tolerance.^{3,4}



Source: Recombinant monoclonal VHH (*Llama glama*), purified from *S.cerevisiae* using affinity chromatography. Immunization with cancer cells. Phage-display selection on recombinant PD-L1 using total elution.

Specificity: Human PD-L1. Q89 does not compete for PD-1 binding.

Formulation: 0.2 µm filtered solution in PBS.

Storage: Shipped on blue ice. Store at 4°C or -20°C (aliquots). Addition of 0.02% sodiumazide is optional.

Applications: ELISA, IF.

Products:

Cat. No.	Target	Tag	Label
Q89	PD-L1	Tagless	No label
Q89c	PD-L1	C-direct	No label
Q89c-lab	PD-L1	C-direct	Biotin / NOTA / HiLyte488 / IRDye800CW

References:

- [Nishimura, H. and T. Honjo](#) (2001) Trends in Immunology 22:265
- [Freeman, G.J. et al.](#) (2000) J. Exp. Med. 192:1027
- [Latchman, Y. et al.](#) (2001) Nat. Immunol. 2:261
- [Park, J.J. et al.](#) (2010) Blood 116:1291-1298
- [Wang, X. et al.](#) (2016) Onco Targets Ther 9:5023-5039
- [Lin, D.Y. et al.](#) (2008) Proc Natl Acad Sci U.S.A. 105:3011-3016