human PD-L1, His-Tag

Programmed death ligand 1, immune checkpoint protein

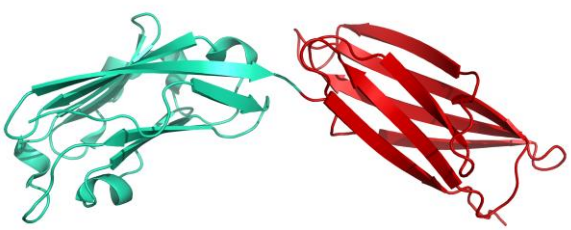
Cat. no. P2020-164

Product Information

Protein:	human PD-L1, His-Tag (~ 28.0 kDa)
Uniprot#:	Q9NZQ7
Sequence:	MFTVTVPKDLYVVEYGSNMTIECKFPVEKQLDLAALIVYWEMEDKNIIQFVHGEEDLKVQH SSYRQRARLLKDQLSLGNAALQITDVKLQDAGVYRCMISYGGADYKRITVKVNAPYNKIN QRILVVDPVTSEHELTCQAEGYPKAEVIWTSSDHQVLSGKTTTTNSKREEKLFNVTSTLR INTTTNEIFYCTFRRLDPEENHTAELVIPELPLAHPPNERT Methionine at pos. 1 might be present due to cloning constraints, C-terminal His-tag not shown in sequence.
Source:	Recombinantly expressed in HEK293.
Tag(s):	His-tag, C-terminal
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
Formulation:	PBS; pH 7.4. Liquid, stored and shipped at -80 °C.
Purity:	> 95 % (will be determined by densitometry of Coomassie stained gel, example next page)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.
Comment:	Protein migrates at higher molecular weight during SDS-PAGE due to posttranslational modifications.

Background Information:

Programmed death ligand 1 (PD-L1), also known as B7 homolog 1 (B7-H1), is a transmembrane glycoprotein, which belongs to the B7 family of immune molecules and plays a pivotal role in regulating adaptive immune responses. Various stimuli, including inflammatory signals and interferon-gamma (IFN-ɣ), induce the expression of PD-L1 on antigen-presenting cells (APCs), such as dendritic cells, macrophages and B cells in peripheral tissues, as well as on epithelial and vascular endothelial cells. Its receptor, programmed cell death protein 1 (PD-1), which is expressed on activated T cells, recognizes PD-L1. This interaction serves as negative feedback mechanism to modulate T cell activation and to prevent excessive immune responses, contributing to immune homeostasis. Apparently, dysregulation of PD-L1 expression or function leads to the development of autoimmune diseases, such as rheumatoid arthritis. Tumor cells evade immune

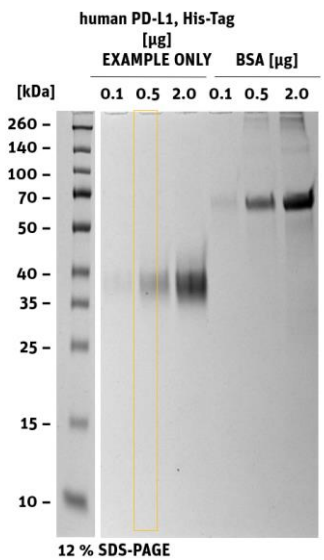


Structural model of human PD-L1

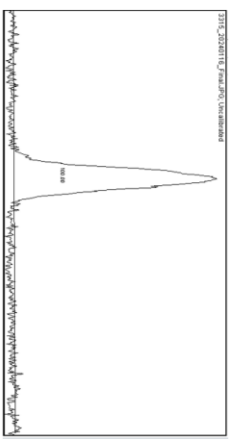
Product Information

surveillance due to overexpression of PD-L1 on various cancer cell types. This enables inhibition of anti-tumor immune responses and promotes tumor growth and progression. PD-L1 expression in the tumor microenvironment has become a critical biomarker for predicting responses to immunotherapy. Immune checkpoint inhibition using monoclonal antibodies blocking the PD-1/PD-L1 interaction has emerged as excellent therapeutic strategy in cancer therapy. Further insights into PD-L1 biology will likely lead to improved treatment modalities and expanded applications in the field of immune-mediated diseases.

Quality Information (provided for each lot):



SDS-PAGE/Coll.Coomassie



	Area	Percent
1	14437.175	100

Histogram (of marked lane in gel picture)