

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                           |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human PD-L2/B7-DC in direct ELISA.                                                      |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>1</sub> Clone # 1054620                                               |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                      |
| <b>Immunogen</b>                                                                                                                                                                                        | Human embryonic kidney cell, HEK293-derived recombinant human PD-L2/B7-DC<br>Accession # Q9BQ51 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm                 |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                    |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                 |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Blockade of Receptor-ligand Interaction** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

Programmed Death Ligand 2 (PD-L2), also known as B7-DC and butyrophilin-like protein, is a member of the B7 family of proteins that provide signals for regulating T-cell activation and tolerance (1). Mature human PD-L2 consists of a 201 amino acid (aa) extracellular domain (ECD) with one V-like and one C-like Ig domain, a 21 aa transmembrane segment, and a 32 aa cytoplasmic domain (2, 3). Within the ECD, mouse and human PD-L2 share 72% aa sequence identity. Alternative splicing generates additional isoforms that lack the second Ig-like domain and may be substituted and truncated following the first Ig-like domain (4). PD-L2 is expressed on dendritic cells, subsets of activated CD4<sup>+</sup> and CD8<sup>+</sup> T cells, and memory B cells that differentiate into plasma cells (3, 5, 6). At inflammatory sites such as rheumatoid arthritis, allergen exposure, and virus infection, PD-L2 is up-regulated on synovial cells, infiltrating macrophages, dendritic cells, and airway epithelial cells (7-11). PD-L2, along with B7-H1/PD-L1, binds to T cell PD-1 where it promotes IFN-γ production and CD40 Ligand up-regulation while inhibiting IL-4 production (2, 3, 12, 13). In addition, PD-L2 binds to RGM-B on macrophages and alveolar epithelial cells, supporting respiratory immune tolerance (14). In asthma, PD-L2 suppresses IL-5 and IL-13 production, promotes IL-12 production by dendritic cells, and supports allergen-induced airway hyper-responsiveness and mucus production (9, 11).

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.