

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse PD-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant human PD-1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse PD-1 Leu25-Gln167 Accession # Q02242
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

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

BACKGROUND

Programmed Death-1 (PD-1) is type I transmembrane protein belonging to the CD28/CTLA-4 family of immunoreceptors that mediate signals for regulating immune responses (1). Other members of this family include CD28, CTLA-4, and ICOS (2-4). PD-1 is most closely related to CTLA-4 and shares approximately 24% amino acid (aa) sequence identity. The mouse PD-1 gene encodes a 288 aa protein with a putative 20 aa signal peptide, a 149 aa extracellular region with one immunoglobulin-like V-type domain, a 21 aa transmembrane domain, and a 98 aa cytoplasmic region. The cytoplasmic tail contains two tyrosine residues that form the immunoreceptor tyrosine-based inhibitory motif (ITIM) and immunoreceptor tyrosine-based switch motif (ITSM) that are important in mediating PD-1 signaling. Mouse and human PD-1 share approximately 69% aa sequence identity. Two B7 family proteins, PD-L1 (also called B7-H1) and PD-L2, have been identified as PD-1 ligands (5, 6). PD-1 is expressed on activated T cells, B cells, myeloid cells, and on a subset of thymocytes. PD-1 deficient mice have a defect in peripheral tolerance and spontaneously develop autoimmune diseases. Binding of PD-1 to PD-L1 or PD-L2 results in the inhibition of TCR-mediated proliferation and cytokine production as well as BCR-mediated signaling. PD-1 likely has an inhibitory role in regulating immune responses (1-4).

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.