

PD-1 Antibody

PD-1 (7A11B1): Programmed cell death 1, PDCD-1, CD279

CATALOG No.: PM-5177

BACKGROUND:

Cell-mediated immune responses are initiated by T lymphocytes that are themselves stimulated by cognate peptides bound to MHC molecules on antigen-presenting cells (APC) (1). T-cell activation is generally self-limited as activated T cells express receptors such as PD-1 (also known as PDCD-1) that mediate inhibitory signals from the APC (2). PD-1 can bind two different but related ligands, PDL-1 and PDL-2. Upon binding to either of these ligands, signals generated by PD-1 inhibit the activation of the immune response in the absence of "danger signals" such as LPS or other molecules associated with bacteria or other pathogens (3). Evidence for this is seen in PD-1-null mice who exhibit hyperactivated immune systems and autoimmune diseases (4). Despite its predicted molecular weight, PD-1 often migrates at higher molecular weight in SDS-PAGE.

SOURCE:

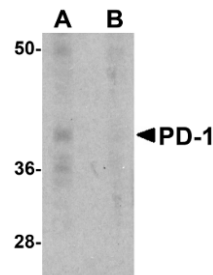
Mouse monoclonal PD-1 antibody was raised against an ~150 amino acid recombinant protein from near the terminus of mouse PD-1 (GenBank accession no. NP_032824).

APPLICATION:

PD-1 antibody can be used for detection of PD-1 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) A-20 cell lysate can be used as positive control. PD-1 antibody is human, mouse and rat reactive. **For research use only.**

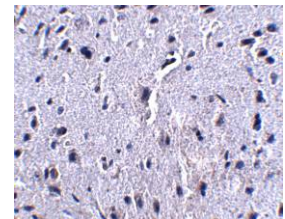
STORAGE:

PD-1 antibody is supplied as purified IgG₁ in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of PD-1 in A-20 cell lysate with PD-1 antibody at 1 µg/ml in the (A) absence and (B) presence of blocking recombinant protein.

Immunohistochemistry of PD-1 in mouse brain tissue with PD-1 antibody at 2.5 µg/ml.



RELATED PRODUCTS:

PD-1 Recombinant Protein, Catalog No. **95-115**.
PD-1 Antibody (12A7D7), Catalog No. **PM-5179**.
PD-1 Antibody (CT), Catalog No. **4065**.
PD-1 Antibody (IN), Catalog No. **4067**.
A-20 Cell Lysate, Catalog No. **1288**.
PDL-1 Antibody, Catalog No. **4059**.
PDL-2 Antibody, Catalog No. **4063**.

REFERENCES:

- Holling TM, Schooten E, and van Den Elsing PJ. Function and regulation of MHC class II molecules in T-lymphocytes: of mice and men. *Hum. Immunol.* 2004; 65:282-90.
- Ishida Y, Agata Y, Shibahara K, et al. Induced expression of PD-1, a novel member of the immunoglobulin gene superfamily, upon programmed cell death. *EMBO J.* 1992; 11:3887-95.
- Zhong X, Bai C, Gao W, et al. Suppression of expression and function of negative immune regulator PD-1 by certain pattern recognition and cytokine receptor signals associated with immune system danger. *Int. Immunol.* 2004; 16:1181-8.
- Nishimura H, Nose M, Hiai H, et al. Development of lupus-like autoimmune diseases by the disruption of the PD-1 gene encoding an ITIM motif-carrying immunoreceptor. *Immunity* 1999; 11:141-51. (09-01D)