

Pdcd-1 (RMP1-14): sc-73402

BACKGROUND

Pdcd-1 (programmed cell death-1 protein), also designated CD279, is a type I transmembrane receptor and a member of the immunoglobulin gene superfamily. Pdcd-1 contains an immunoreceptor tyrosine-based inhibitory motif (ITIM) within the cytoplasmic domain, which is conserved between the mouse and human homologs. Expression of Pdcd-1 is detected in mouse thymus, and it is induced in stimulated B and T cell lines, where it may play a role in the negative regulation of various immune responses. Receptors such as Pdcd-1 function by recruiting tyrosine phosphatases, including SHP-1 and SHIP, which are responsible for altering various B cell responses. Additionally, in activated lymphocytes, Pdcd-1 mediates the activation of the classical type of programmed cell death.

REFERENCES

1. Ishida, Y., et al. 1992. Induced expression of PD-1, a novel member of the immunoglobulin gene superfamily, upon programmed cell death. *EMBO J.* 11: 3887-3895.
2. Agata, Y., et al. 1996. Expression of the PD-1 antigen on the surface of stimulated mouse T and B lymphocytes. *Int. Immunol.* 8: 765-772.
3. Ono, M., et al. 1996. Role of the inositol phosphatase SHIP in negative regulation of the immune system by the receptor FcγRIIb. *Nature* 383: 263-266.
4. Vivier, E., et al. 1997. Immunoreceptor tyrosine-based inhibitory motifs. *Immunol. Today* 18: 286-291.
5. Nishimura, H., et al. 1999. Development of lupus-like autoimmune diseases by disruption of the PD-1 gene encoding an ITIM motif-carrying immunoreceptor. *Immunity* 11: 141-151.
6. Okazaki, T., et al. 2002. New regulatory co-receptors: inducible co-stimulator and PD-1. *Curr. Opin. Immunol.* 14: 779-782.
7. Sheppard, K.A., et al. 2004. PD-1 inhibits T cell receptor induced phosphorylation of the ZAP70/CD3ζ signalosome and downstream signaling to PKCθ. *FEBS Lett.* 574: 37-41.

CHROMOSOMAL LOCATION

Genetic locus: Pdcd1 (mouse) mapping to 1 D.

SOURCE

Pdcd-1 (RMP1-14) is a rat monoclonal antibody raised against Pdcd-1 transfected BHK cells of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Pdcd-1 (RMP1-14) is recommended for detection of Pdcd-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for Pdcd-1 siRNA (m): sc-72037, Pdcd-1 shRNA Plasmid (m): sc-72037-SH and Pdcd-1 shRNA (m) Lentiviral Particles: sc-72037-V.

Molecular Weight of Pdcd-1: 55 kDa.

SELECT PRODUCT CITATIONS

1. Roy, S., et al. 2019. Crosstalk of PD-1 signaling with SIRT1/FOXO-1 axis in progression of visceral leishmaniasis. *J. Cell Sci.* 25 pii: jcs.226274.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.