SANTA CRUZ BIOTECHNOLOGY, INC.

Pdcd-1L2 (TY25): sc-57398

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Engagement of CD28 by B7-1 (CD80) or B7-2 (CD86) in the presence of antigen promotes T cell proliferation, cytokine production, differentiation of effector T cells and the induction of Bcl-x, a promoter of T cell survival. Conversely, engagement of CTLA4 by B7-1 or B7-2 may inhibit proliferation and IL-2 production. Pdcd-1L1 (programmed cell death ligand-1), also known as B7-H1 or PD-L1, is 290 amino acid type I transmembrane protein which is 20% and 15% identical to B7-1 and B7-2, respectively. Pdcd-1L2 has immunoglobulin V-like and C-like domains and a 30 amino acid cytoplasmic tail. It does not bind CD28, cytotoxic T lymphocyte A4 or ICOS (inducible co-stimulator). IL-2, although produced in small amounts, is required for the effect of Pdcd-1L1 co-stimulation. The gene which encodes Pdcd-1L1 maps to human chromosome 9p24. Pdcd-1L2 (programmed cell death ligand-2) is a 73 amino acid protein which contains a signal sequence, IgV- and IgC-like domains, a transmembrane region and a cytoplasmic region. The gene which encodes Pdcd-1L2 maps to human chromosome 9p24.2. The constitutive expression of Pdcd-1L1 and Pdcd-1L2 on parenchymal cells of heart, lung and kidney suggests that the Pdcd-1-Pdcd-L system could provide unique negative signaling to help prevent autoimmune disease.

REFERENCES

1. Dong, H., Zhu, G., Tamada, K. and Chen, L. 1999. B7-H1, a third member of the B7 family, co-stimulates T-cell proliferation and interleukin-10 secretion. Nat. Med. 5: 1365-1369.
2. Freeman, G.J., Long, A.J., Iwai, Y., Bourque, K., Chernova, T., Nishimura, H., Fitz, L.J., Malenkovich, N., Okazaki, T., Byrne, M.C., Horton, H.F., Fouser, L., Carter, L., Ling, V., Bowman, M.R., Carreno, B.M., Collins, M., et al. 2000. Engagement of the PD-1 immunoinhibitory receptor by a novel B7 family member leads to negative regulation of lymphocyte activation. J. Exp. Med. 192: 1027-1034.
3. Latchman, Y., Wood, C.R., Chernova, T., Chaudhary, D., Borde, M., Chernova, I., Iwai, Y., Long, A.J., Brown, J.A., Nunes, R., Greenfield, E.A. and Bourque, K. 2001. PD-L2 is a second ligand for PD-1 and inhibits T cell activation. Nat. Immunol. 2: 261-268.
4. Nishimura, H. and Honjo, T. 2001. PD-1: an inhibitory immunoreceptor involved in peripheral tolerance. Trends Immunol. 22: 265-268.
5. LocusLink Report (LocusID: 605402). http://www.ncbi.nlm.nih.gov/LocusLink

CHROMOSOMAL LOCATION

Genetic locus: Pdcd1lg2 (mouse) mapping to 19 C1.

SOURCE

Pdcd-1L2 (TY25) is a rat monoclonal antibody raised against Pdcd-1L2 transfected RAW264.7 cells of mouse origin.

STORAGE

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

PRODUCT

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

Pdcd-1L2 (TY25) is available conjugated to agarose (sc-57398 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-57398 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-57398 PE), fluorescein (sc-57398 FITC), Alexa Fluor® 488 (sc-57398 AF488), Alexa Fluor® 546 (sc-57398 AF546), Alexa Fluor® 594 (sc-57398 AF594) or Alexa Fluor® 647 (sc-57398 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-57398 AF680) or Alexa Fluor® 790 (sc-57398 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

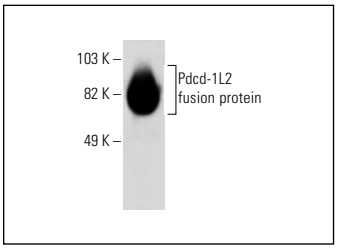
APPLICATIONS

Pdcd-1L2 (TY25) is recommended for detection of Pdcd-1L2 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

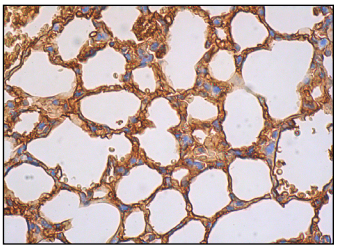
Suitable for use as control antibody for Pdcd-1L2 siRNA (m): sc-39702, Pdcd-1L2 shRNA Plasmid (m): sc-39702-SH and Pdcd-1L2 shRNA (m) Lentiviral Particles: sc-39702-V.

Molecular Weight of Pdcd-1L2: 32 kDa.

DATA



Pdcd-1L2 (TY25): sc-57398. Western blot analysis of mouse recombinant Pdcd-1L2 fusion protein.



Pdcd-1L2 (TY25): sc-57398. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lung tissue showing membrane and cytoplasmic staining of pneumocytes and macrophages.

SELECT PRODUCT CITATIONS

1. Wang, Y., Liu, J., Yang, X., Liu, Y., Liu, Y., Li, Y., Sun, L., Yang, X. and Niu, H. 2018. Bacillus Calmette-Guérin and anti-PD-L1 combination therapy boosts immune response against bladder cancer. Onco Targets Ther. 11: 2891-2899.

RESEARCH USE

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