

Pdcd-4 (h): 293T Lysate: sc-176183

BACKGROUND

The transformation suppressor gene Pdcd-4 (programmed cell death gene 4) inhibits the tumor-promoter mediated transformation of mouse keratinocytes and is a potential tumor suppressor gene in the development of human lung cancer. Biochemical analysis suggests that the Pdcd-4 protein is involved in protein translation as well as in nuclear events. Pdcd-4 directly interacts with the RNA helicase eIF4A and inhibits protein synthesis by interfering with the assembly of the cap-dependent translation initiation complex. Pdcd-4 also suppresses the transactivation of AP-1 responsive promoters by c-Jun, suggesting that the transformation-suppressor activity of Pdcd-4 might be due, at least in part, to the inhibition of c-Jun activity. In addition to affecting c-Jun phosphorylation, Pdcd-4 blocks the recruitment of the coactivator p300 by c-Jun.

REFERENCES

1. Lankat-Buttgereit, B. and Göke, R. 2003. Programmed cell death protein 4 (Pdcd-4): a novel target for antineoplastic therapy? *Biol. Cell* 95: 515-519.
2. Bohm, M., Sawicka, K., Siebrasse, J.P., Brehmer-Fastnacht, A. and Peters, R., Klempnauer, K.H. 2003. The transformation suppressor protein Pdcd-4 shuttles between nucleus and cytoplasm and binds RNA. *Oncogene* 22: 4905-4910.
3. Bitomsky, N., Böhm, M. and Klempnauer, K.H. 2004. Transformation suppressor protein Pdcd-4 interferes with JNK-mediated phosphorylation of c-Jun and recruitment of the coactivator p300 by c-Jun. *Oncogene* 23: 7484-7493.
4. Afonja, O., Juste, D., Das, S., Matsushashi, S. and Samuels, H.H. 2004. Induction of Pdcd-4 tumor suppressor gene expression by RAR agonists, antiestrogen and HER-2/Neu antagonist in breast cancer cells. Evidence for a role in apoptosis. *Oncogene* 23: 8135-8145.
5. Lankat-Buttgereit, B., Gregel, C., Knolle, A., Hasilik, A., Arnold, R. and Göke, R. 2004. Pdcd-4 inhibits growth of tumor cells by suppression of carbonic Anhydrase type II. *Mol. Cell. Endocrinol.* 214: 149-153.
6. Göke, R., Gregel, C., Göke, A., Arnold, R., Schmidt, H. and Lankat-Buttgereit, B. 2004. Programmed cell death protein 4 (Pdcd-4) acts as a tumor suppressor in neuroendocrine tumor cells. *Ann. N.Y. Acad. Sci.* 1014: 220-221.

CHROMOSOMAL LOCATION

Genetic locus: PDCD4 (human) mapping to 10q25.2.

PRODUCT

Pdcd-4 (h): 293T Lysate represents a lysate of human Pdcd-4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

Pdcd-4 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Pdcd-4 antibodies. Recommended use: 10-20 µl per lane.

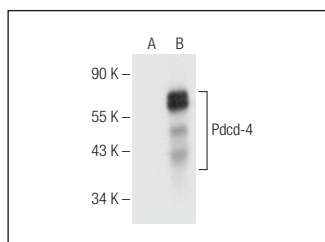
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Pdcd-4 (B-4): sc-376430 is recommended as a positive control antibody for Western Blot analysis of enhanced human Pdcd-4 expression in Pdcd-4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

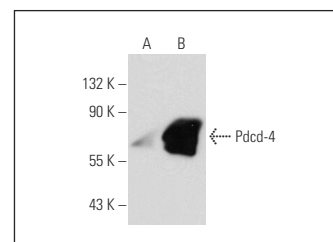
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Pdcd-4 (B-4): sc-376430. Western blot analysis of Pdcd-4 expression in non-transfected: sc-117752 (A) and human Pdcd-4 transfected: sc-176183 (B) 293T whole cell lysates.



Pdcd-4 (k4C1): sc-130545. Western blot analysis of Pdcd-4 expression in non-transfected: sc-117752 (A) and human Pdcd-4 transfected: sc-176183 (B) 293T whole cell lysates.

PROTOCOLS

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