SANTA CRUZ BIOTECHNOLOGY, INC.

Pygopus 2 (m2): 293T Lysate: sc-122857

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pygopus 2, also known as PYGO2, is a 406 amino acid protein that is the human homolog of the *Drosophila* Pygopus protein. Localized to the nucleus, Pygopus 2 contains one PHD finger that interacts with the homology domain of the Wnt signaling protein Bcl-9. This interaction joins Pygopus 2 with the β-catenin/TCF complex (a crucial complex in Wnt signaling), thereby allowing β-catenin to transcriptionally activate Wnt target genes. Association of Pygopus 2 with proteins involved in the Wnt signaling pathway is thought to regulate proper signal transduction, as absence of the Pygopus 2/β-catenin interaction may play a role in development of B cell malignancies. In addition, Pygopus 2 expression is upregulated in and required for the growth of breast cancer cells, suggesting a crucial role in carcinogenesis.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606903. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Li, B., Mackay, D.R., Ma, J. and Dai, X. 2004. Cloning and developmental expression of mouse Pygopus 2, a putative Wnt signaling component. Genomics 84: 398-405.
3. Popadiuk, C.M., C.M., Xiong, J., Wells, M.G., Andrews, P.G., Dankwa, K., Hirasawa, K., Lake, B.B. and Kao, K.R. 2006. Antisense suppression of Pygopus 2 results in growth arrest of epithelial ovarian cancer. Clin. Cancer Res. 12: 2216-2223.
4. Andrews, P.G., Lake, B.B., Popadiuk, C. and Kao, K.R. 2007. Requirement of Pygopus 2 in breast cancer. Int. J. Oncol. 30: 357-363.
5. Schwab, K.R., Patterson, L.T., Hartman, H.A., Song, N., Lang, R.A., Lin, X. and Potter, S.S. 2007. Pygo1 and Pygo2 roles in Wnt signaling in mammalian kidney development. BMC Biol. 5: 15-15.
6. Song, N., Schwab, K.R., Patterson, L.T., Yamaguchi, T., Lin, X., Potter, S.S. and Lang, R.A. 2007. Pygopus 2 has a crucial, Wnt pathway-independent function in lens induction. Development 134: 1873-1885.
7. Li, B., Rhéaume, C., Teng, A., Bilanchone, V., Munguia, J.E., Hu, M., Jessen, S., Piccolo, S., Waterman, M.L. and Dai, X. 2007. Developmental phenotypes and reduced Wnt signaling in mice deficient for Pygopus 2. Genesis 45: 318-325.

CHROMOSOMAL LOCATION

Genetic locus: Pygo2 (mouse) mapping to 3 F1.

PRODUCT

Pygopus 2 (m2): 293T Lysate represents a lysate of mouse Pygopus 2 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.

APPLICATIONS

Pygopus 2 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Pygopus 2 antibodies. Recommended use: 10-20 µl per lane.

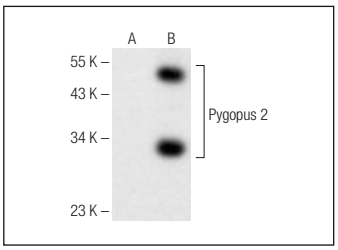
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Pygopus 2 (B-4): sc-373994 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Pygopus 2 expression in Pygopus 2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

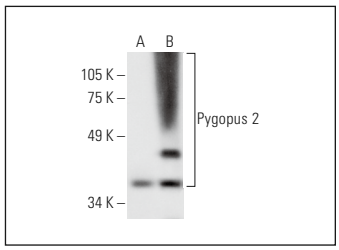
RECOMMENDED SUPPORT REAGENTS

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



Pygopus 2 (B-4): sc-373994. Western blot analysis of Pygopus 2 expression in non-transfected: sc-117752 (**A**) and mouse Pygopus 2 transfected: sc-122857 (**B**) 293T whole cell lysates.



Pygopus 2 (B-8): sc-390528. Western blot analysis of Pygopus 2 expression in non-transfected: sc-117752 (**A**) and mouse Pygopus 2 transfected: sc-122857 (**B**) 293T whole cell lysates.

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.