

Pygopus 2 (H-216): sc-98744

BACKGROUND

Pygopus 2, also known as PYG02, 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., et al. 2004. Cloning and developmental expression of mouse Pygopus 2, a putative Wnt signaling component. *Genomics* 84: 398-405.

CHROMOSOMAL LOCATION

Genetic locus: PYG02 (human) mapping to 1q21.3; Pygo2 (mouse) mapping to 3 F1.

SOURCE

Pygopus 2 (H-216) is a rabbit polyclonal antibody raised against amino acids 127-339 mapping within an internal region of Pygopus 2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Pygopus 2 (H-216) is recommended for detection of Pygopus 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Pygopus 2 siRNA (h): sc-76303, Pygopus 2 siRNA (m): sc-76304, Pygopus 2 shRNA Plasmid (h): sc-76303-SH, Pygopus 2 shRNA Plasmid (m): sc-76304-SH, Pygopus 2 shRNA (h) Lentiviral Particles: sc-76303-V and Pygopus 2 shRNA (m) Lentiviral Particles: sc-76304-V.

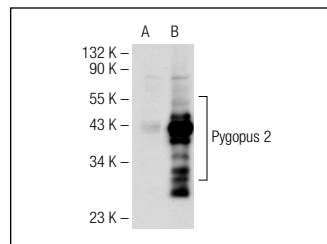
Molecular Weight of Pygopus 2: 42 kDa.

Positive Controls: JAR cell lysate: sc-2276, Pygopus 2 (m2): 293T Lysate: sc-122857 or HeLa whole cell lysate: sc-2200.

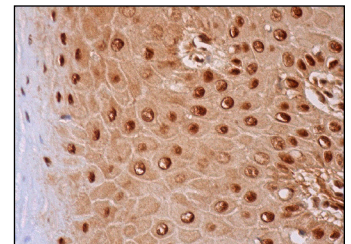
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Pygopus 2 (H-216): sc-98744. 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 (H-216): sc-98744. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing nuclear and cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Beghini, A., et al. 2012. Regeneration-associated WNT signaling is activated in long-term reconstituting AC133bright acute myeloid leukemia cells. *Neoplasia* 14: 1236-1248.
2. Mologni, L., et al. 2012. Synergistic effects of combined Wnt/KRAS inhibition in colorectal cancer cells. *PLoS ONE* 7: e51449.

STORAGE

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

RESEARCH USE

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



Try **Pygopus 2 (B-12): sc-390506** or **Pygopus 2 (B-8): sc-390528**, our highly recommended monoclonal alternatives to Pygopus 2 (H-216).