

# Pygopus 2 (N-19): sc-74878

## 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  $\beta$ -catenin/TCF complex (a crucial complex in Wnt signaling), thereby allowing  $\beta$ -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/ $\beta$ -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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Pygopus 2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Pygopus 2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-74878 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Pygopus 2 (N-19) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pygopus 2 (N-19) is also recommended for detection of Pygopus 2 in additional species, including equine, bovine and porcine.

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.

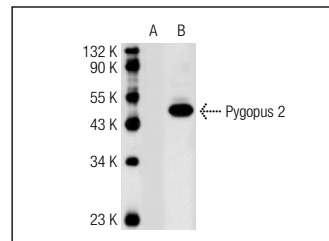
Molecular Weight of Pygopus 2: 42 kDa.

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

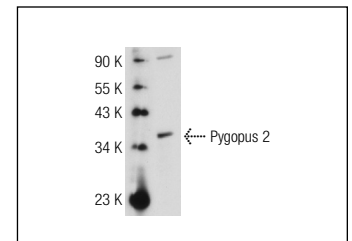
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Pygopus 2 (N-19): sc-74878. 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 (N-19): sc-74878. Western blot analysis of Pygopus 2 expression in HeLa whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Cantù, C., et al. 2013. The Pygo2-H3K4me2/3 interaction is dispensable for mouse development and Wnt signaling-dependent transcription. *Development* 140: 2377-2386.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **Pygopus 2 (B-12): sc-390506** or **Pygopus 2 (B-8): sc-390528**, our highly recommended monoclonal alternatives to Pygopus 2 (N-19).