

# WIF-1 (H-180): sc-25520

## BACKGROUND

The Wnt genes are a group of conserved, cysteine-rich, secreted glycoproteins that are required for numerous developmental processes including embryogenesis, asymmetric cell division and central nervous system (CNS) patterning. Wnt association with the transmembrane spanning receptor frizzled, activates dishevelled, which downregulates glycogen synthase kinase (GSK) through serine phosphorylation. Reduced levels of active GSK causes accumulation of  $\beta$ -catenin and subsequent regulation of developmentally significant Wnt target genes. Wnt antagonists such as Dickkopf (Dkk), frizzled-related protein (sFRP) and Wnt inhibitory factor-1 (WIF-1), are necessary to ensure normal spatial and temporal patterns of Wnt activity during developmental processes. Wnt inhibitory factor-1 (WIF-1) is a 379-amino acid, secreted protein that contains an N-terminal signal sequence, a 150-amino acid WIF domain, 5 epidermal growth factor-like repeats, and a 45-amino acid C-terminal hydrophilic domain.

## CHROMOSOMAL LOCATION

Genetic locus: WIF1 (human) mapping to 12q14.3; Wif1 (mouse) mapping to 10 D2.

## SOURCE

WIF-1 (H-180) is a rabbit polyclonal antibody raised against amino acids 1-180 of WIF-1 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.

## STORAGE

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

## APPLICATIONS

WIF-1 (H-180) is recommended for detection of WIF-1 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).

WIF-1 (H-180) is also recommended for detection of WIF-1 in additional species, including canine.

Suitable for use as control antibody for WIF-1 siRNA (h): sc-36837, WIF-1 siRNA (m): sc-36838, WIF-1 shRNA Plasmid (h): sc-36837-SH, WIF-1 shRNA Plasmid (m): sc-36838-SH, WIF-1 shRNA (h) Lentiviral Particles: sc-36837-V and WIF-1 shRNA (m) Lentiviral Particles: sc-36838-V.

Molecular Weight (predicted) of WIF-1: 42 kDa.

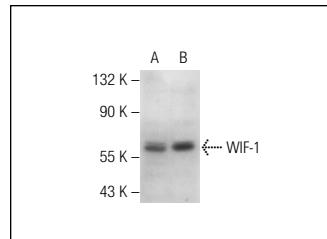
Molecular Weight (observed) of WIF-1: 55-63 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, 3T3-L1 cell lysate: sc-2243 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.

## DATA



WIF-1 (H-180): sc-25520. Western blot analysis of WIF-1 expression in 3T3-L1 (A) and HeLa (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Li, X., et al. 2009. Urothelial transdifferentiation to prostate epithelia is mediated by paracrine TGF- $\beta$  signaling. *Differentiation* 77: 95-102.
- Gustafson, B., et al. 2010. Activation of canonical wingless-type MMTV integration site family (Wnt) signaling in mature adipocytes increases  $\beta$ -catenin levels and leads to cell dedifferentiation and Insulin resistance. *J. Biol. Chem.* 285: 14031-14041.
- Gustafson, B. and Smith, U. 2012. The WNT inhibitor Dickkopf 1 and bone morphogenetic protein 4 rescue adipogenesis in hypertrophic obesity in humans. *Diabetes* 61: 1217-1224.
- Yu, L., et al. 2013. Wnt signaling is altered by spinal cord neuronal dysfunction in amyotrophic lateral sclerosis transgenic mice. *Neurochem. Res.* 38: 1904-1913.

## RESEARCH USE

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


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Try **WIF-1 (B-10): sc-373780**, our highly recommended monoclonal alternative to WIF-1 (H-180).