

# NSD2 (S-18): sc-50149

## BACKGROUND

The WHSC1 gene encodes the NSD2 protein, which contains four domains present in other developmental proteins: a PWWP domain, an HMG box, a SET domain and a PHD-type zinc finger. Wolf-Hirschhorn syndrome (WHS) is a malformation syndrome associated with a hemizygous deletion of the distal short arm of chromosome 4. The WHSC1 gene maps to the 165 kb WHS critical region, therefore implying that the gene may be responsible for several of the phenotypic features of WHS, such as mental retardation, microcephaly, seizures, hypotonia, cleft lip and/or palate, strabismus, hypertelorism, downturned "fishlike" mouth, short upper lip and philtrum, small chin, ear tags or pits, and cranial asymmetry. NSD2 is expressed ubiquitously in rapidly growing embryonic tissues, a pattern which corresponds to affected organs in WHS patients. Alternative splicing of the WHSC1 gene results in multiple transcript variants encoding different isoforms of NSD2.

## REFERENCES

1. Rauch, A. et al. 2001. First known microdeletion within the Wolf-Hirschhorn syndrome critical region refines genotype-phenotype correlation. *Am. J. Med. Genet.* 99: 338-342.
2. Gutmajster, E. and Rokicka, A. 2002. Genetic determination of Wolf-Hirschhorn syndrome. *Wiad. Lek.* 55: 706-710.
3. Santra, M. et al. 2003. A subset of multiple myeloma harboring the t(4;14)(p16;q32) translocation lacks FGFR3 expression but maintains an IGH/MMSET fusion transcript. *Blood* 101: 2374-2376.
4. Douglas, J. et al. 2005. Evaluation of NSD2 and NSD3 in overgrowth syndromes. *Eur. J. Hum. Genet.* 13: 150-153.

## CHROMOSOMAL LOCATION

Genetic locus: WHSC1 (human) mapping to 4p16.3; Whsc1 (mouse) mapping to 5 B2.

## SOURCE

NSD2 (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NSD2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-50149 P, (100 µg 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.

## PROTOCOLS

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

## APPLICATIONS

NSD2 (S-18) is recommended for detection of NSD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

NSD2 (S-18) is also recommended for detection of NSD2 in additional species, including equine and canine.

Suitable for use as control antibody for NSD2 siRNA (h): sc-61233, NSD2 siRNA (m): sc-61234, NSD2 shRNA Plasmid (h): sc-61233-SH, NSD2 shRNA Plasmid (m): sc-61234-SH, NSD2 shRNA (h) Lentiviral Particles: sc-61233-V and NSD2 shRNA (m) Lentiviral Particles: sc-61234-V.

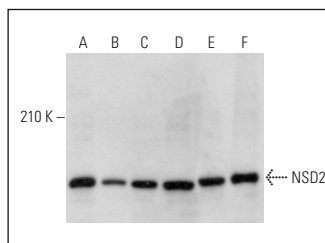
Molecular Weight of NSD2: 152 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, HeLa whole cell lysate: sc-2200 or IMR-32 nuclear extract: sc-2148.

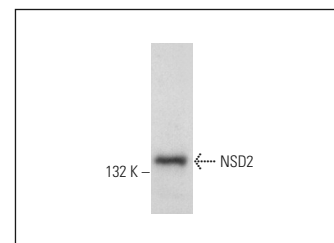
## RECOMMENDED SECONDARY REAGENTS

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



NSD2 (S-18): sc-50149. Western blot analysis of NSD2 expression in IMR-32 (A), Hep G2 (B), Raji (C), HeLa (D), HEK293 (E) and Ramos (F) whole cell lysates.



NSD2 (S-18): sc-50149. Western blot analysis of NSD2 expression in IMR-32 nuclear extract.

## RESEARCH USE

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



Try **NSD2 (G-12): sc-365627**, our highly recommended monoclonal alternative to NSD2 (S-18).