SANTA CRUZ BIOTECHNOLOGY, INC.

NSD2 (G-12): sc-365627

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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, down-turned "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.

CHROMOSOMAL LOCATION

Genetic locus: WHSC1 (human) mapping to 4p16.3.

SOURCE

NSD2 (G-12) is a mouse monoclonal antibody raised against amino acids 1-120 mapping at the N-terminus of NSD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NSD2 (G-12) is available conjugated to agarose (sc-365627 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365627 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365627 PE), fluorescein (sc-365627 FITC), Alexa Fluor® 488 (sc-365627 AF488), Alexa Fluor® 546 (sc-365627 AF546), Alexa Fluor® 594 (sc-365627 AF594) or Alexa Fluor® 647 (sc-365627 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365627 AF680) or Alexa Fluor® 790 (sc-365627 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, NSD2 (G-12) is available conjugated to biotin (sc-365627 B), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

NSD2 (G-12) is recommended for detection of NSD2 of human origin by Western Blotting (starting dilution 1:100, 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).

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

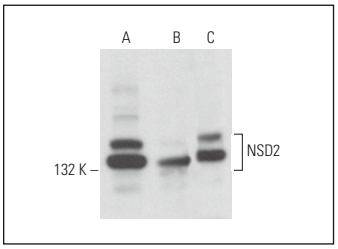
Molecular Weight of NSD2: 152 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, HEK293 whole cell lysate: sc-45136 or IMR-32 cell lysate: sc-2409.

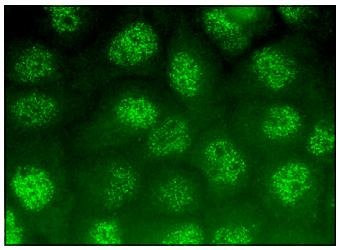
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NSD2 (G-12): sc-365627. Western blot analysis of NSD2 expression in Raji (**A**), HEK293 (**B**) and IMR-32 (**C**) whole cell lysates.



NSD2 (G-12): sc-365627. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Ding, L., et al. 2017. Mutational landscape of pediatric acute lymphoblastic leukemia. Cancer Res. 77: 390-400.
2. Jung, H. and Seo, S.B. 2020. Histone lysine demethylase 3B (KDM3B) regulates the propagation of autophagy via transcriptional activation of autophagy-related genes. PLoS ONE 15: e0236403.
3. Song, D., et al. 2021. NSD2 promotes tumor angiogenesis through methylating and activating STAT3 protein. Oncogene 40: 2952-2967.
4. Zhang, C., et al. 2024. Targeting KPNB1 with genkwadaphnin suppresses gastric cancer progression through the Nur77-mediated signaling pathway. Eur. J. Pharmacol. 977: 176697.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.