

NSD3 (N-20): sc-50152

BACKGROUND

The deduced 1,437 amino acid NSD3 protein contains 2 PWWP domains involved in protein-protein interactions, 5 PHD-type zinc finger motifs found in chromatin-associated proteins, a SAC (SET-associated cys-rich) domain, a SET domain and a C-terminal C5HCH domain. Two NSD3 variants have been identified. The short variant comprised of 645 amino acids, arises from alternative polyadenylation and exon splicing and contains a single PWWP domain. A longer NSD3 variant, which is only expressed in HeLa cells, is comprised of 1,388 amino acid residues. The human WHSC1L1 gene, which encodes the NSD3 protein, shares 68% and 55% identity with mouse NSD1 and human WHSC1, respectively. Highest expression of NSD3 is observed in brain, heart and skeletal muscle tissues; lower levels of NSD3 expression are observed in the liver and lungs.

REFERENCES

- Angrand, P.O., Apiou, F., Stewart, A.F., Dutrillaux, B., Losson, R. and Chambon, P. 2001. NSD3, a new SET domain-containing gene, maps to 8p12 and is amplified in human breast cancer cell lines. *Genomics* 74: 79-88.
- Stec, I., van Ommen, G.J. and den Dunnen, J.T. 2001. WHSC1L1, on human chromosome 8p11.2, closely resembles WHSC1 and maps to a duplicated region shared with 4p16.3. *Genomics* 76: 5-8.
- Rosati, R., La Starza, R., Veronese, A., Aventin, A., Schwienbacher, C., Vallespi, T., Negrini, M., Martelli, M.F. and Mecucci, C. 2002. NUP98 is fused to the NSD3 gene in acute myeloid leukemia associated with t(8;11)(p11.2;p15). *Blood* 99: 3857-3860.
- Douglas, J., Coleman, K., Tatton-Brown, K., Hughes, H.E., Temple, I.K., Cole, T.R., Rahman, N., et al. 2005. Evaluation of NSD2 and NSD3 in overgrowth syndromes. *Eur. J. Hum. Genet.* 13: 150-153.
- Tonon, G., Wong, K.K., Maulik, G., Brennan, C., Feng, B., Zhang, Y., Khatry, D.B., Protopopov, A., You, M.J., Aguirre, A.J., Martin, E.S., Yang, Z., Ji, H., Chin, L. and Depinho, R.A. 2005. High-resolution genomic profiles of human lung cancer. *Proc. Natl. Acad. Sci. USA* 102: 9625-9630.

CHROMOSOMAL LOCATION

Genetic locus: WHSC1L1 (human) mapping to 8p11.23; Whsc111 (mouse) mapping to 8 A2.

SOURCE

NSD3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NSD3 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-50152 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NSD3 (N-20) is recommended for detection of NSD3 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

NSD3 (N-20) is also recommended for detection of NSD3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NSD3 siRNA (h): sc-61235, NSD3 siRNA (m): sc-61236, NSD3 shRNA Plasmid (h): sc-61235-SH, NSD3 shRNA Plasmid (m): sc-61236-SH, NSD3 shRNA (h) Lentiviral Particles: sc-61235-V and NSD3 shRNA (m) Lentiviral Particles: sc-61236-V.

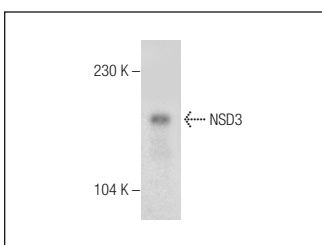
Molecular Weight of NSD3 isoforms 1-4: 162/156/73/155 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or rat brain extract: sc-2392.

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



NSD3 (N-20): sc-50152. Western blot analysis of NSD3 expression in rat brain tissue extract.

STORAGE

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

MONOS
Satisfaction
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Try **NSD3 (E-3): sc-398186** or **NSD3 (H-8): sc-271839**, our highly recommended monoclonal alternatives to NSD3 (N-20).