

# DNASE2B (L-13): sc-131920

## BACKGROUND

DNase II is a ubiquitously expressed endonuclease that, in the absence of divalent cations, catalyzes DNA hydrolysis. DNASE2B (deoxyribonuclease II  $\beta$ ), also known as DLAD, is a 361 amino acid protein that shares structural and sequence similarity to DNase II. Expressed at high levels in salivary gland and eye tissues and at lower levels in prostate, lung and lymph node, DNASE2B localizes to the lysosome and functions to catalytically cleave nucleoside 3'-phosphates and 3'-phosphooligonucleotides. Via its endonucleolytic activity, DNASE2B hydrolyzes DNA under acidic conditions and plays a role in the degradation of nuclear DNA during lens differentiation within the eye. DNASE2B exists as two isoforms produced by alternative splicing events. While isoform one is found in tissues throughout the body, isoform two is expressed primarily in the lungs.

## REFERENCES

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2. Shiokawa, D. and Tanuma, S. 1999. DLAD, a novel mammalian divalent cation-independent endonuclease with homology to DNase II. *Nucleic Acids Res.* 27: 4083-4089.
3. Krieser, R.J. and Eastman, A. 2000. Deoxyribonuclease II: structure and chromosomal localization of the murine gene, and comparison with the genomic structure of the human and three *C. elegans* homologs. *Gene* 252: 155-162.
4. Shiokawa, D. and Tanuma, S.I. 2001. Isolation and characterization of the DLAD/DLAD genes, which lie head-to-head with the genes for urate oxidase. *Biochem. Biophys. Res. Commun.* 288: 1119-1128.
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6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608057. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. MacLea, K.S., Krieser, R.J. and Eastman, A. 2003. A family history of deoxyribonuclease II: surprises from *Trichinella spiralis* and *Burkholderia pseudomallei*. *Gene* 305: 1-12.
8. Nishimoto, S., Kawane, K., Watanabe-Fukunaga, R., Fukuyama, H., Ohsawa, Y., Uchiyama, Y., Hashida, N., Ohguro, N., Tano, Y., Morimoto, T., Fukuda, Y. and Nagata, S. 2003. Nuclear cataract caused by a lack of DNA degradation in the mouse eye lens. *Nature* 424: 1071-1074.

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: Dnase2b (rat) mapping to 2q44.

## SOURCE

DNASE2B (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DNASE2B of rat 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-131920 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DNASE2B (L-13) is recommended for detection of DNASE2B of rat 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).

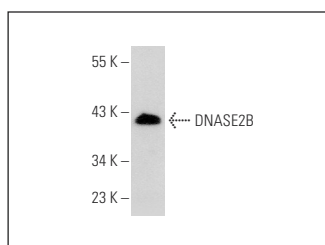
Molecular Weight of DNASE2B: 40 kDa.

Positive Controls: rat liver extract: sc-2395.

## 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



DNASE2B (L-13): sc-131920. Western blot analysis of DNASE2B expression in rat liver tissue extract.

## RESEARCH USE

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