

DNASE2 Antibody / Deoxyribonuclease-2-alpha Antibody (FY13609)

Catalog No.	Formulation	Size
FY13609	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	O00115
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml ELISA : 0.1-0.5 ug/ml
Limitations	The DNASE2 Antibody / Deoxyribonuclease-2-alpha Antibody is available for research use only.

DNASE2 Antibody by IHC in human prostate carcinoma. Immunohistochemistry of paraffin-embedded human prostate carcinoma using Deoxyribonuclease-2-alpha Antibody shows strong brown cytoplasmic staining in glandular epithelial tumor cells. Following heat-mediated antigen retrieval in EDTA buffer (pH 8.0), tissue sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/mL overnight at 4°C. Immunoreactivity was visualized with an HRP-conjugated secondary antibody and DAB chromogen; hematoxylin counterstaining identifies tissue nuclei.

DNASE2 Antibody by WB in HeLa cells. Western blot analysis using Deoxyribonuclease-2-alpha Antibody detects a band near 32 kDa in human HeLa whole-cell lysate (lane 1). The observed migration is below the calculated molecular weight of approximately 40 kDa. Published studies have reported DNASE2 near 32 kDa in human tissues and proteolytically processed DNase II forms near 30 kDa in other mammals, which may account for the lower apparent mass. Reduced lysates containing 30 ug protein per lane were separated by 10% SDS-PAGE and transferred to nitrocellulose. Following blocking with 5% nonfat milk, the membrane was incubated with primary antibody at 0.5 ug/mL overnight at 4°C. Bound antibody was detected using an HRP-conjugated secondary antibody and chemiluminescence.

Description

DNASE2 Antibody / Deoxyribonuclease-2-alpha Antibody recognizes DNASE2, a protein with important roles in cellular physiology. Deoxyribonuclease II alpha is an acid-active endonuclease encoded by DNASE2. The enzyme functions primarily within acidic intracellular compartments, including lysosomes, where it helps degrade DNA delivered through endocytic, phagocytic, or autophagic pathways. Unlike many nucleases, DNase II activity does not depend on divalent metal ions and is adapted to the low-pH environment of the lysosomal lumen.

One major physiological role of DNASE2 is the disposal of DNA from engulfed apoptotic cells and expelled nuclei during erythrocyte development. Macrophages must efficiently digest this material after phagocytosis to prevent intracellular accumulation of undegraded nucleic acids. DNA clearance is especially important because nucleic acids can stimulate innate immune pathways when they persist in inappropriate cellular compartments. Deoxyribonuclease-2-alpha Antibody is a useful designation for this molecular target.

Experimental loss of DNASE2 activity has been linked to inflammatory responses driven by the persistence of self-derived DNA. In animal models, defective DNA degradation can provoke interferon-related signaling and disturbances in tissue homeostasis. Human DNASE2 deficiency has also been associated with inflammatory disease, illustrating how lysosomal nucleic acid turnover helps restrain inappropriate immune activation.

DNASE2 operates at the intersection of lysosomal catabolism, programmed cell death, hematopoiesis, and innate immunity. Its function differs from that of nucleases involved in nuclear DNA replication or repair: rather than maintaining genomic integrity within the nucleus, it disposes of DNA that has entered degradative compartments. This specialized role makes DNASE2 an important component of cellular waste processing and immune tolerance. NSJ Bioreagents provides DNASE2 Antibody for research into the molecular biology of DNASE2. A DNASE2 Antibody supports investigation of the biological processes associated with this protein.

Explore related research targets in our [Immunology Antibodies](#) collection.

Application Notes

Investigators should determine the optimal dilution of the DNASE2 Antibody / Deoxyribonuclease-2-alpha Antibody empirically for their experimental conditions.

Immunogen

The DNASE2 Antibody was generated using e. coli-derived human DNASE2 recombinant protein (amino acids R77-P346).

Storage

The DNASE2 Antibody is stable for up to one month at 4oC after reconstitution. For longer-term storage, aliquot and store at -20oC for up to six months. Do not repeatedly freeze and thaw.

Alternate Names

DNASE2 antibody, Deoxyribonuclease-2-alpha antibody, deoxyribonuclease 2 antibody, lysosomal antibody, DNASE2A antibody, DNase II alpha antibody, Deoxyribonuclease II alpha antibody, Deoxyribonuclease 2 alpha antibody

