

## Product Information

### Anti-Deoxyribonuclease II (DNase II)

produced in rabbit, affinity isolated antibody

Catalog Number **D1689**

#### Product Description

Anti-Deoxyribonuclease II (DNase II) is produced in rabbit using as immunogen a peptide corresponding to amino acids 347-360 of human DNase II precursor.<sup>1-3</sup>

Anti-DNase II specifically recognizes DNase II (32 kDa) by immunoblotting using human spleen lysates. The antibody also recognizes the pro-enzyme (40 kDa).

Deoxyribonuclease II (DNase II) is implicated in diverse functions. It digests DNA at low pH and is thought to be a lysosomal enzyme responsible for degrading the exogenous DNA that enters the cell.<sup>4,5</sup> It also exists in the nucleus of the cell and is a candidate endonuclease responsible for degrading the DNA during apoptosis.<sup>6</sup> DNase II was found to localize in the cytoplasm of epithelial cells but was concentrated in the nuclei of the lens fiber cells.<sup>7</sup> It causes both chromatin condensation and DNA fragmentation.<sup>8</sup> Over-expression of DNase II induces chromatin condensation.<sup>2</sup> DNase II is involved in the DNA fragmentation induced by lovastatin through activation of caspase-3 and DNase II activities in HL-60 cells.<sup>9</sup>

The genes encoding human,<sup>1-3</sup> porcine,<sup>10</sup> and murine<sup>11</sup> DNase II have been cloned. The DNase II gene encodes a 40 kDa proenzyme. The mature enzyme consists of two non-identical subunits, the 32 kDa ( $\alpha$ ) and 12 kDa ( $\beta$ ) chains, generated by proteolytic processing. DNase II is ubiquitously expressed in human tissues.

#### Reagents

Supplied at ~0.5 mg/ml in phosphate buffered saline, containing 0.02% sodium azide

#### Storage/Stability

Antibody can be stored at 2-8 °C for three months and at -20 °C for one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Product Profile

**Immunoblotting:** the recommended working concentration is 0.5-1  $\mu$ g/ml (1:1,000 – 1:500 dilution) using a human spleen lysate. A band of ~32 kDa is detected. A THP-1 cell lysate may also be used as a positive control. A band of ~40 kDa is detected, representing the pro-enzyme form of DNase II.

**Note:** In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

#### References

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