

Datasheet for ABIN5706727

## Deoxyribonuclease I

### Overview

Quantity: 100 units

### Product Details

Purpose: Deoxyribonuclease I

Purification: Deoxyribonuclease I is Lyophilized in vials. Each 10,000 unit vial contains 2 mg glycine, 2  $\mu$  moles calcium, and  $\geq$ 10,000 units of DNase I. Each 2,500 unit vial contains 0.5 mg glycine, 0.5  $\mu$  moles calcium, and  $\geq$ 2,500 units of DNase I. Dissolving the entire 10,000 unit vial in 5 ml, or the entire 2,500 unit vial in 1.25 ml, provides the equivalent of a 1 mg/ml solution. (ku = 1000un).  
Store at 2 - 8°C.

Biological Activity Comment: 2,290 Kunitz/mL

Unit Definition: Deoxyribonuclease I application is one unit will cause an increase in the absorbance at 260 nm of 0.001 per minute per ml at 25° C, pH 5.0 when acting on highly polymerized DNA according to the assay method of Kunitz (J.Gen.Physiol. 33, 349 and 363 (1950)).

### Target Details

Gene ID: 282217, 9913

UniProt: [P00639](#)

### Application Details

Application Notes: Application Note:A solution in 1 mM Calcium Chloride and 50 % (v/v) glycerol. Specific conditions for reactivity should be optimized by the end user.

Comment: Synonyms: Deoxyribonuclease I reagent, DNL1  
Background: Deoxyribonuclease I (usually called DNase I), is an endonuclease coded by the human gene DNASE1. DNase I is a nuclease that cleaves DNA preferentially at phosphodiester linkages adjacent to a pyrimidine nucleotide, yielding 5'-phosphate-terminated polynucleotides

## Application Details

---

with a free hydroxyl group on position 3', on average producing tetranucleotides. It acts on single-stranded DNA, double-stranded DNA, and chromatin. In addition to its role as a waste-management endonuclease, it has been suggested to be one of the deoxyribonucleases responsible for DNA fragmentation during apoptosis. DNase I binds to the cytoskeletal protein actin. It binds actin monomers with very high (sub-nanomolar) affinity and actin polymers with lower affinity. The function of this interaction is unclear. However, since actin-bound DNase I is enzymatically inactive, the DNase-actin complex might be a storage form of DNase I that prevents damage of the genetic information.

Gene Name: DNASE1

---

Restrictions: For Research Use only

## Handling

---

Format: Liquid

Buffer: Buffer: See application note.

Storage: 4 °C,-20 °C

Expiry Date: 6 months

## Publications

---

Product cited in: Johnson, Drugan, Miller, Evans: "38" in: , Vol. 1363, Issue Nucleic acids research, pp. 28-39, (1991)