

Human DNASE1 / Deoxyribonuclease I / DNL1 Protein (His Tag)

Catalog Number: 13801-H08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

DNL1; DRNI; AI788650; DNaseI; Dnl1

Protein Construction:

A DNA sequence encoding the human DNASE1 (P24855) (Met1-Lys282) was expressed with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Leu 23

Molecular Mass:

The recombinant human DNASE1 consists of 271 amino acids and predicts a molecular mass of 30.7 KDa. It migrates as an approximately 37 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

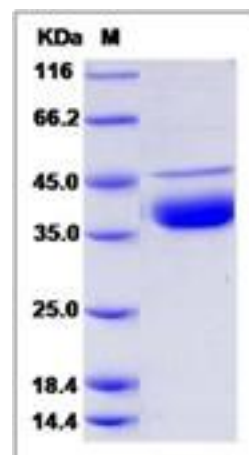
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

DNase1, also known as deoxyribonuclease I and DNL1, is a member of the DNase family. DNaseI is a nuclease that cleaves DNA preferentially at phosphodiester linkages adjacent to a pyrimidine nucleotide, yielding 5'-phosphate-terminated polynucleotides with a free hydroxyl group on position 3', on average producing tetranucleotides. DNaseI binds to the cytoskeletal protein actin. It binds actin monomers with very high (sub-nanomolar) affinity and actin polymers with lower affinity. Mutations in DNase1 gene have been associated with systemic lupus erythematosus (SLE), an autoimmune disease. DNase1 is used to treat the one of the symptoms of cystic fibrosis by hydrolyzing the extracellular DNA in sputum and reducing its viscosity.

References

1. Shak S. et al., 1991, Proc Natl Acad Sci. 87 (23): 9188-92.
2. Yasutomo K. et al., 2001, Nat Genet. 28 (4): 313-4.
3. Hakkim A. et al., 2010, Proc Natl Acad Sci. 107 (21): 9813-8.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>