SuperNuclease

catalog Number : BD-PD266651

General Information

Gene Name Synonym:

Nuclease, Serratia marcescens' extracellular endonuclease

Protein Construction:

SuperNuclease is a recombined Serratia marcescens' extracellular endonuclease.

Source: *Serratia marcescens*

Expression Host: *E.coli*

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

> 99 % as determined by SEC-HPLC Analysis.

Endotoxin:

< 0.01 EU/1000 units protein as determined by the LAL method.

Activity:

Measured by its ability to cleave Salmon sperm DNA substrate.
One unit is defined as the amount of enzyme that
causes a ΔA260 of 1.0 in 30 minutes at 37° C.
The specific activity is ≥ 1.1×10^6 units/mg.

Stability:

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

Predicted N terminal:

Three isoforms with different N terminal may be found from the compound—Sm1 (22D-266N), Sm2 (23T-266N) and Sm3 (25E-266N), the activity analysis shows that they were functionally equivalent

Molecular Mass:

The SuperNuclease comprises 266 amino acids and has a calculated molecular mass of Sm1 (26708.2 Da), Sm2 (26591.8 Da) and Sm3 (26376.4 Da). The apparent molecular mass of SuperNuclease is approximately 26.5 KDa.

Usage Guide

Storage:

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

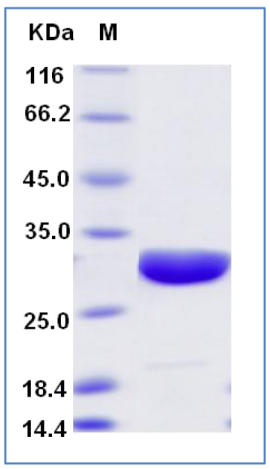
Avoid repeated freeze-thaw cycles.

Protocol

Large scale cell lysis treatment:

1). Lysis buffer preparation:
The lysis buffer should be suitable for the protein as well as the downstream purification processes, and so on;
2). Resuspend cell plates in lysis buffer:
The ratio of lysis buffer (mL) against the gram of cell can be (10-20):1;
3). Add SuperNuclease (250 units to 1 g cells):
It is well recommended to optimize the amount of SuperNuclease;
4). Lysate cell by mechanical or chemical methods on ice or at room temperature:
Methods: Ultrasonic disruption, High Pressure Homogenizer, tissue homogenizer, and so on;
5). Obtain clear cell lysate supernatant by centrifugation at ~12,000 rpm for 0.5 hour.

SDS-PAGE:



SEC-HPLC: