

PRODUCT INFORMATION

Salt Active Nuclease, solution

Cat. no. 18541

Product Description:

General Salt Active Nuclease is a highly salt-tolerant, heat-labile, non-specific endonuclease that degrades double- and single-stranded nucleic acids. Supplied as solution in 25 mM BisTris-HCl, pH 7.0, 5 mM MgCl₂, 500 mM NaCl, 0.01 % (v/v) Tween 20, 50 % (v/v) glycerol.

Application Cell lysate clearance, protein and virus purification, removal of nucleic acids from protein samples to reduce viscosity, especially when ionic strength is raised to limit the protein-DNA interactions.

Features

- Specific activity: min. 1.75 x 10⁵ U/mg
- pH range: 7.5 – 9.5
- Salt optimum: 500 mM NaCl
- Active at low temperatures, e.g. 10 % at 10 °C

Storage Long term storage: -15 °C to -25 °C

Operating conditions	Salt (NaCl/ KCl) Temperature Mg ²⁺ /Mn ²⁺ pH	Optimal	Effective (≥ 10 % enzyme activity)
		500 mM ca. 35 °C 5 – 20 mM 9.0	50 mM – 1 M 10 °C – 50 °C 1 – 40 mM 7.0 – 9.5

DNA degrading in various samples

Sample	Final enzyme concentration		Conditions
	DNA removal*	Decontamination**	
Protein	100 U/ml	1000 U/ml	30 min at 25 – 37 °C
Reagent	100 U/ml	1000 U/ml	
Cell extract	1000 U/ml	N/A	
Cell lysate (soluble fraction)	500 U/ml	N/A	60 min at 25 – 37 °C or overnight at 4 °C
Viscosity reduction	25 -50 U/ml	-	10 - 20 min at 25 °C

* DNA amount reduced to a not detectable level in agarose gel electrophoresis

** DNA amount reduced to a not detectable level in bacterial 23SrDNA qPCR assay

Nuclease inactivation

Conditions	Dithiotreitol (DTT)	Tris(2-carboxyethyl)-phosphine (TCEP)
18 h / 4 °C	-	10 mM
60 min / 25 °C	10 mM	5 mM
30 min / 30 °C	10 mM	5 mM
30 min / 40 °C	5 mM	1 mM
30 min / 50 – 70 °C	1 mM	1 mM

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