

PRODUCT INFORMATION

Salt Active Nuclease, min. 1.75 x 10⁵ U/mg

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) Triton X-100, 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 optimum: 7.5 - 8
- 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	Optimal		Effective (≥ 10 % enzyme activity)
	Salt (NaCl/ KCl)	500 mM	50 mM – 1 M
Temperature	ca. 35 °C	10 °C – 50 °C	
Mg ²⁺ /Mn ²⁺	5 – 20 mM	1 – 40 mM	
pH	9.0	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 / 25 – 37 °C
Reagent	100 U/ml	1000 U/ml	
Cell extract	1000 U/ml	N/A	60 min / 25 – 37 °C or overnight / 4 °C
Cell lysate (soluble fraction)	500 U/ml	N/A	
Viscosity reduction	25 -50 U/ml	-	
			10 - 20 min / 25 °C

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

** DNA amount amount reduced to a not detectable level in bacterial 23S rDNA 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