

Manual

Viscolase

Highly efficient nuclease degrading DNA and RNA. Reduces viscosity of the protein preparations.
Concentration 250 U/ μ l.

catalog #	size
1010-25	25 000 U
1010-100	100 000 U

For research use only.

Guarantee

A&A Biotechnology provides guarantee on this product.

The company does not guarantee correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components

Description

Viscolase is a recombinant nuclease having a broad spectrum of nucleolytic activity. It is encoded by the same gene as Benzonase® (Merck KgaA). Viscolase is produced in a unique yeast protein expression system. This enzyme has activity of endonuclease and degrades all forms of DNA and RNA, and it is active over a wide buffer range.

Application

- viscosity reduction in protein extracts
- sample preparation for 2D electrophoresis gel
- removal of nucleic acid contaminants from recombinant protein preparation

Contents

	1010-25	1010-100	storage
Viscolase	25 000 U	100 000 U	-20 °C
storage buffer: 20 mM Tris-HCl, pH 8.0, 20 mM NaCl, 2 mM MgCl ₂ , 50% glycerol (v/v)			

Unit definition

1 U of viscolase is defined as the amount of enzyme that causes A_{260} of 1 U in 30 min, which corresponds to complete digestion of 37 µg of DNA. Standard reaction conditioner 1 mg/ml sonicated DNA substrate in 50 mM Tris-HCl, pH 8.0, 0.1 mg/ml BSA, 1 mM MgCl₂ at 37 °C; measured as perchloric acid-soluble digestion product.

Notes

- Storage above -20 °C results in loss activity.
- For efficiency and economy, small amounts of Viscolase can be diluted in a buffer with 20 mM Tris-HCl, pH 8.0, 20 mM NaCl, 2 mM MgCl₂. Diluted samples can be stored for several days at 4 °C without loss activity.

Reaction conditions

	optimal	effective
Mg²⁺ concentration	1-2 mM	1-10 mM
pH	8.0-9.0	6.0-10.0
temperature	37 °C	0-42 °C
DTT	0-100 mM	>100 mM
2-mercaptoethanol	0-100 mM	>100 mM
Na⁺, K⁺ ions	0-20 mM	0-150 mM
nonionic detergents (e.g. Triton-X 100)	0-0.1%	0-1%

Viscolase is inhibited (approximately 50% reduction in relative activity) when:

1. monovalent cation concentration is above 50 mM
2. phosphate concentration is above 20 mM
3. ammonium sulphate concentration is above 25 mM



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