DATA SHEET

cellco
Biotecnologia ao seu alcance

Turbo Nuclease

Serratia marcescens, recombinant, *E. coli*

Cat. Nº.	Amount
☐ ENZ-103S	5.000 units
☐ ENZ-103M	25.000 units
☐ ENZ-103L	2 x 25.000 units
☐ ENZ-103XL	500.000 units

Unit Definition: One unit will digest sonicated salmon sperm DNA to acid-soluble oligonucleotides equivalent to a Δ260 of 1.0 in 30 min at pH 8.0 at 37 °C.

Storage Buffer
The enzyme is supplied in: 20 mM Tris-HCl (pH 8.0), 20 mM NaCl, 2 mM $MgCl_2$, 1 mM DTT and 50% (v/v) glycerol.

Concentration:
250 units/µL

For *in vitro* use only!

Shelf Life:
12 months

Shipping:
Shipped on blue ice

Storage Conditions:
Store at -20 °C

Additional Storage Conditions:
Avoid freeze/thaw cycles.

Description:
Turbo Nuclease is a recombinant form of *Serratia macescens* extracellular endonuclease (encoded by the same gene of Benzonase®) produced in *E. coli* using a proprietary process. This endonuclease attacks and degrades all forms of DNA and RNA (single stranded, double stranded, linear and circular) and is effective over a wide range of operating conditions. The optimum pH for enzyme activity is found to be 8.0-9.2. It completely digests nucleic acids to 5 - monophosphate terminated oligonucleotides 3 to 5 bases in length. This is ideal for removal of nucleic acids from recombinant proteins and for applications where complete digestion of nucleic acids is desirable. It also reduces viscosity in protein extracts and prevents cell clumping. Pre-treatment of a protein sample improves its resolution on 2D gel electrophoresis by eliminating any bound nucleic acids.

Application:
Used to remove of nucleic acid from protein samples. Turbo Nuclease is very effective in reducing the viscosity of cell lysates. It reduces smearing when used with 10% SDS to make whole cell lysate for SDS-PAGE. It also replaces crude DNase I in many applications, including protein purification.

Procedure:

- Make a fresh, cold lysis buffer in which the target protein is soluble and is compatible with downstream purification processes, e.g. minimal amount of EDTA or DTT if a Ni-NTA column will be used.
- Resuspend the thawed cell paste in lysis buffer. Use 2-10 mL
- Lysis Buffer for each gram of cell paste.
- Add Turbo Nuclease to 25 units/mL A fluid "aqueous" solution will result after 15 min.