diagenode
A Hologic Company

TECHNICAL DATASHEET

Micrococcal Nuclease

Cat. No. C06070001
Source: E. coli
Lot #: 001
Size: 250, 500, 1000 µl
Concentration: 500 U/ml
Source: Staphylococcus aureus
Purity: Purified using glycerol gradientand ion exchange chromatography, >98% purity as determined by SDS-PAGE.

Storage buffer: 20mM Tris-Cl pH 8.0, 50mM NaCl, 1mM DTT and 50% glycerol.
Unit definition: One unit will produce 1.0 µmole of acid soluble polynucleotides from native DNA per min at pH 8 at 37 °C, based on EM/260 = 10,000 for the mixed nucleotides.
Storage: Store at -20°C; guaranteed stable for 2 years from date of receipt when stored properly.
Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Description: Micrococcal nuclease or MNase is a 16.9 kDa endonuclease derived from Staphylococcus aureus. It is purified from an E. coli strain expressing an N-terminal 6XHIS tagged micrococcal nuclease.. Purified protein exhibit an strong endonuclease activity against single-stranded, double-stranded, circular and linear nucleic acids. The enzyme is active in the pH range of 7.0 - 10.0, with optimal activity at pH 9.2 for both RNA and DNA substrates. The rate of cleavage is 30 times greater at the 5' side of A or T than at G or C and results in the production of mononucleotides and oligonucleotides with terminal 3'-phosphates. MNase is suitable for removing nucleic acids from cell lysates, releasing chromatin-bound proteins and shearing chromatin for use in chromatin immunoprecipitation (ChIP) experiments.

Quality control

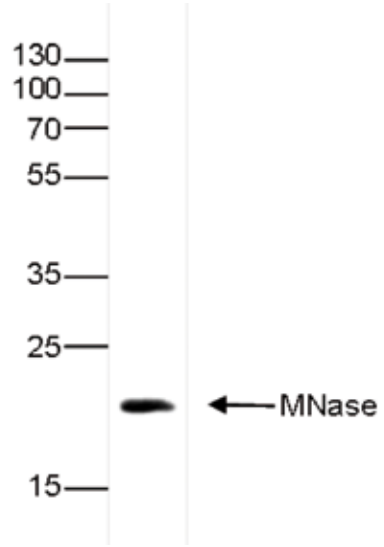

Figure 1.

SDS page of the micrococcal MNase. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

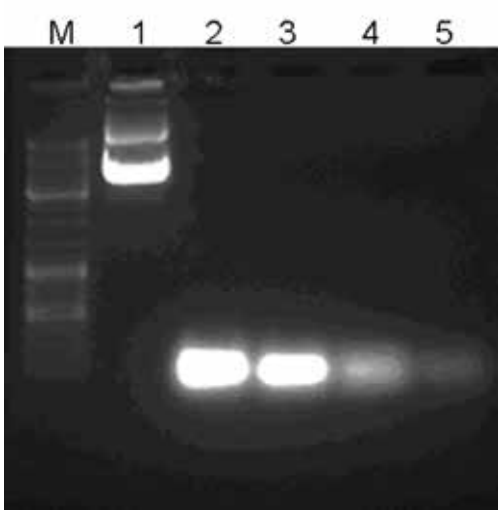

Figure 2.

MNase activity assay. 0.5 µg plasmid DNA was digested with the Diagenode MNase (concentration 5U/ml) in a buffer containing 20 mM Tris-HCl Ph 7.6, 3 mM CaCl2 and 0.01% BSA and analyzed by agarose gel eletrophoresis. The digestion was carried out for 0.5, 1, 2 and 4 minutes (lane 2, 3, 4 and 5, repectively). An undigested control is shown in lane 1.

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