cat.# 1017-10

10 000 U

Mutanolysin
recombinant

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Mutanolysin
recombinant

* **Recombinant enzyme obtained in bacterial expression system**
* **High purity >95%**

Mutanolysin (EC 3.2.1.17) (N-acetylmuramidase) is a muralytic enzyme that cleaves the β-N-acetylmuramyl-(1->4)-N-acetylglucosamine linkage of the bacterial cell wall polymer peptidoglycan-polysaccharide. Its carboxy terminal moieties are involved in the recognition and binding of unique cell wall structures aboundant in many gram-positive bacteria.

Recombinant mutanolysin effectively lyses particularly problematic bacteria. Including but not limited to: *Streptococcus, Lactobacillus, Lactococcus, Listeria.*

Recombinant mutanolysin and lysozyme activity is synergistic. Using mutanolysin and lysozyme mixture leads to increased yield of bacteria lysis.

Application:
1. Mild conditions formation of spheroplasts of gram-positive bacteria
2. Enzymatic cell lysis in DNA and RNA isolation process
3. Effective lysis of gram-positive bacteria in environmental studies and DNA-based microbial detection

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10 000 U

Mutanolysin
recombinant, lyophilisate

Recommended protocol (for cell wall digestion):

1. Trasfer 0.2-1.0 ml of overnight bacterial culture to 1.5 ml Eppendorf tube and centrifuge (i.e. 2500 x g, 5 min).

2. Discard supernatant and suspend the bacterial pellet in 100 µl of the digestion buffer (suggested buffer: 50 mM MES pH 6.0, 1 mM $MgCl_2$).
Different digestion buffers may also be tested.
Note: The mutanolysin acivity may strongly differ among various strains of Gram-positive bacteria tested.

3. Add 50 U of mutanolysin. Mix the contents and incubate for 20 min at 50 °C.

For best isolation results we suggest to use the mutanolysin with the following dedicated kits:
Genomic Mini AX Bacteria+ Spin (cat. # 060-100MS) or Genomic Mini AX Bacteria+ (cat. # 060-60M)

Concentration: 10 U/µl
Enzyme form: solution

Store at -20 °C

Unit definition:
One unit will produce a ΔA600 nm of 0.01 per minute at 50 mM MES pH 6.0, 1 mM $MgCl_2$ at 37 °C in a 1 ml volume using suspension of *Streptococcus faecalis* cell wall as substrate.

For R&D use only

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