NEBuffer 3.1

Description: New England Biolabs provides a color-coded 10X NEBuffer with each restriction endonuclease to ensure optimal (100%) activity. Most of our enzymes are supplied with one of four standard NEBuffers. Occasionally, an enzyme has specific buffer requirements not met by one of the four standard NEBuffers, in which case the enzyme is supplied with its own unique NEBuffer.

1X NEBuffer 3.1:
100 mM NaCl
50 mM Tris-HCl
10 mM MgCl₂
100 µg/ml BSA
pH 7.9 @ 25°C
Supplied as a 10X concentrated stock

Quality Control
pH range: The pH of 10X NEBuffer 3.1 is between pH 7.8 and 8.0.

16-hour Non-specific Nuclease Activity Assay:
A 50 µl reaction in 1X NEBuffer 3.1 containing 1 µg of φX HaeIII digested DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Endonuclease (nicking) Activity Assay: A 50 µl reaction in 1X NEBuffer 3.1 containing 1 µg of supercoiled φX174 DNA incubated for 4 hours at 37°C results in < 10% conversion to the nicked form as determined by agarose gel electrophoresis.

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