Supplied in: 100 mM NaCl, 10 mM Tris-HCl (pH 8.0), 0.5 mM EDTA, 1 mM dithiothreitol and 50% glycerol.

Applications:
- Degradation of single-stranded RNA to mononucleotides (1)
- Used in ribonuclease protection assays

Reagents Supplied with Enzyme:
10X NEBuffer 3.

Reaction Conditions: 1X NEBuffer 3. Incubate at 37°C.

1X NEBuffer 3:
100 mM NaCl
50 mM Tris-HCl
10 mM MgCl₂
1 mM dithiothreitol
pH 7.9 @ 25°C

Unit Definition: One unit is defined as the amount of enzyme required to fully digest 1 picomole of single-stranded RNA in a total reaction volume of 10 µl in 15 minutes in 1X NEBuffer 3 as visualized on a 20% acrylamide gel (40:1 Bis) stained with SYBR Gold®.

Endonuclease Activity: Incubation of 50 units of enzyme with 1 µg qX174 RF I DNA for 1 hour at 37°C in 50 µl reaction buffer resulted in < 10% conversion to RF II.

Heat Inactivation: 70°C for 20 minutes.

Note: RNase I will not degrade DNA. It has a strong preference for single-stranded RNA over double-stranded RNA.

References: