



CRISPR/Cas9 Nucleases

RNA-guided endonuclease Cas9 associated with Type II CRISPR/Cas systems.

- ◆ Ideal for DNA editing
- ◆ *Streptococcus pyogenes* Cas9 nuclease

No. **9000S** CRISPR/Cas9 nuclease; 1,000 pmol; Concentration: 10 pmol/μL

No. **9000L** CRISPR/Cas9 nuclease; 5,000 pmol; Concentration: 10 pmol/μL



RNase Inhibitor (RI)

Suitable for use in isothermal amplification, molecular diagnostic assays, cDNA synthesis, and other applications where RNA stability is important.

- ◆ 50 kDa protein that specifically inhibits RNases A, B, and C
- ◆ No inhibition of polymerase activity when used with Taq DNA polymerase, AMV, M-MuLV, HIV reverse transcriptases, or phage RNA polymerases

No. **3001S** RNase Inhibitor; 6,000 U; Concentration: 40,000 U/mL

No. **3001L** RNase Inhibitor; 30,000 U; Concentration: 40,000 U/mL



Cod Uracil-DNA glycosylase (cUNG)

Recombinant, thermolabile enzyme for removal of uracil from DNA.

- ◆ Ideal for preventing carryover contamination during RNA or DNA amplification
- ◆ Only commercially available UNG that is heat-labile

No. **4000S** Cod Uracil-DNA glycosylase; 2,000 Units; Concentration: 50 U/μL

No. **4000L** Cod Uracil-DNA glycosylase; 10,000 Units; Concentration: 50 U/μL



T4 gene 32 protein (T4 gp32)

Single-stranded DNA binding (ssDNA) protein required for bacteriophage T4 replication and repair.

- ◆ Stabilizes ssDNA structures and improve restriction digests
- ◆ Improves T4 DNA polymerase activity and yield of PCR reactions, including those with long amplicons

No. **3200S** T4 gp32 SSB; 200 μg; Concentration: 10 μg/μL

No. **3200L** T4 gp32 SSB; 1,000 μg; Concentration: 10 μg/μL



MS2 Phage

E. coli bacteriophage with a single-stranded RNA genome of 3569 nucleotides protected from nuclease degradation by a capsid of 180 coat protein monomers.

- ◆ Useful as a process control in nucleic acid-based amplification techniques like RT-PCR, RT-LAMP, particularly those that involve viral RNA extraction
- ◆ Virus is a Biosafety Level 1 organism, is not pathogenic to humans

No. **6000S** MS2 phage; 1E9 particles; Concentration: 1E10 particles/mL

No. **6000L** MS2 phage; 5E10 particles; Concentration: 1E11 particles/mL



VariSafe™ RNA Controls

Nuclease-resistant, single-stranded RNAs. Suitable as internal controls for RNA extraction from various sample matrices and internal control in amplification reactions or next generation sequencing.

- ◆ Non-infectious, MS2 phage-like particles that protect their contents from degradation by nucleases
- ◆ Can package sequences of up to 1.5 kb

No. **1001S** RNA SARS-CoV-2 (Wuhan-Hu-1) N gene, 1E6 copies; Concentration 1E4 cp/μL

No. **1001L** RNA SARS-CoV-2 (Wuhan-Hu-1) N gene, 1E10 copies; Concentration 1E7 cp/μL

No. **1002S** RNA SARS-CoV-2 (Wuhan-Hu-1) N gene with human RNase P gene (RPP30), 1E6 copies; Concentration 1E4 cp/μL

No. **1002L** RNA SARS-CoV-2 (Wuhan-Hu-1) N gene with human RNase P gene (RPP30), 1E10 copies; Concentration 1E7 cp/μL

No. **1101S** RNA FMDV polyprotein (consensus), 1E6 copies; Concentration 1E4 cp/μL

No. **1101L** RNA FMDV polyprotein (consensus), 1E10 copies; Concentration 1E7 cp/μL

No. **1106S** RNA FMDV polyprotein (consensus) with *Bos taurus* 18S rDNA, 1E6 copies; Concentration 1E4 cp/μL

No. **1106L** RNA FMDV polyprotein (consensus) with *Bos taurus* 18S rDNA, 1E10 copies; Concentration 1E7 cp/μL

No. **1201S** RNA HIV-1 gag gene, 1E6 copies; Concentration 1E4 cp/μL

No. **1201L** RNA HIV-1 gag gene, 1E10 copies; Concentration 1E7 cp/μL