Proteinase K, Molecular Biology Grade

Source: Enygodontium album (Tritirachium album)

Applications:
- Isolation of plasmid and genomic DNA
- Isolation of RNA
- Inactivation of RNases, DNases and enzymes in reactions
- Removal of enzymes from DNA to improve cloning efficiency
- PCR purification

Reaction Conditions: Proteinase K is active in a wide range of buffers including all NEB specific restriction endonuclease buffers. It is highly active between pH 7.5 and 12.0 and temperatures between 20 and 60°C (1,2). Proteinase K is also active in chelating agents such as EDTA (4) and activity is stimulated in up to 2% SDS or 4 M urea (3).

Unit Definition: One unit will digest urea-denatured hemoglobin at 37°C (pH 7.5) per minute to produce equal absorbance as 1.0 µmol of L-tyrosine using Folin & Ciocalteu’s phenol reagent (6).

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qPCR DNA Contamination (eukaryotic genomic):
The product is screened for the presence of eukaryotic genomic DNA using SYBR® Green qPCR with primers specific to the eukaryotic 18S rRNA locus. Results are quantified using a standard curve generated from purified Engyodontium album genomic DNA.

Note:
Proteinase K is stable for at least 2 years at -20°C. No loss of activity is observed after 10 freeze-thaw cycles.

References: