

Protease

Catalog No: 29012

Quality Control:

Source:

Tritirachium album

Description:

Proteinase K is a broad-spectrum serine protease useful for general digestion of proteins. It is active in the presence of metal ions, SDS, urea, chelating agents (e.g. EDTA), sulfhydryl reagents and trypsin or chymotrypsin inhibitors. It is stable over a wide pH range (4-12.5), with optimal activity at pH 6.5-9.5. Activity can be stimulated by addition of denaturing agents, (SDS < 2.0% w/v and urea < 4 M). The optimal temperature for the enzyme is 65°C; it is 12 times more active at 65°C than at 25°C. Rapid denaturation occurs at temperatures above 65°C. While autolysis occurs increasingly at alkaline pH, proteinase K is not completely inactivated by autolysis.

Applications:

Proteinase K is used to rapidly inactivate nucleases, such as DNases and RNases, when isolating RNA and high-molecular-weight DNA from tissues and cell lines. It can also be used to remove nucleases in the preparation of tissue sections for *in situ* hybridization.

Performance and quality testing:

Endodeoxyribonuclease and exodeoxyribonuclease assays; liquid form tested for absence of RNase activity.

Specific activity:

> 20 Units/mg, where one unit produces 1 µmol of Folin-positive amino acid in 1 minute at 37°C.

Storage:

Store the powder at 4°C, and the resuspended solution (resuspended in sterile water) at -20°C.

Safety warnings and precautions:

For research use only. Not for diagnosis in humans or animals. Do not use internally or externally in animals.