



**Just fine Molecular Biology**

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## **Proteinase K** from *Tritirachium album*

**Description** Proteinase K is a non-specific serine protease having a very high specific activity. It has been used for isolation of mRNA, high molecular weight DNA and to inactivate other enzymatic activities. Proteinase K is active with or without the presence of SDS and EDTA. Proteinase K is a broad-spectrum serine protease for general digestion of proteins in biological samples. Enzyme is free from RNase and DNase activities. Recommended working concentration for Proteinase K is 50-100µg/ml in the majority of applications

**Specific activity:** > 30 units/mg

**Form:** Available in both liquid (in 50mM Tris-HCl (pH 8.0), 1mM CaCl<sub>2</sub>, 50% glycerol) and Lyophilised powder form.

**Unit definition:** One unit is defined as the amount of enzyme that liberates Folin-positive amino acids and peptides, corresponding to 1 pmole tyrosine under assay conditions in 1 minute using haemoglobin as substrate (1).

**Stability and storage:** Proteinase K in its lyophilised form is stable at RT for short periods of time (up to 4 days). For long term storage, we recommend -20 °C.

**Recommended Reaction Buffer:** 50mM Tris-HCl (pH 7.5), 1mM CaCl<sub>2</sub>.

**Storage** Store at -20 °C.

### **QUALITY CONTROL**

**16-hour incubation:** a 50 µl reaction solution containing 1 µg of lambda-DNA and 1.8 units enzyme incubated for 16 hours at 37 °C resulted in the same DNA band pattern after gel electrophoresis as compared to the pattern produced without enzyme.

**Exonuclease activity:** Incubation of 6 units of the enzyme for 4 hours at 37 °C in 50 µl assay buffer with 1 g sonicated 3H DNA (3 x 10<sup>5</sup>) cpm/µg) released less than 0.2% of radioactivity.

**Endonuclease activity:** Incubation of 1.8 units of enzyme with 1 µg PhiX174 RFI DNA in 50 µl assay buffer for 4 hours at 37 °C gave less than 1.5% conversion of RFI.

**RNase contamination** Incubation of 6 units of enzyme with 1 µg MS2 RNA in 50 µl assay buffer for 4 hours at 37 °C resulted in the same RNA band pattern after gel electrophoresis as compared to the pattern produced without the enzyme.

(1) Anson M.M (1939) J. Gen. Physiol., 22, 79.

<b>Catalog #</b>	<b>Pack size</b>
405002	200 mg
405010	1 g
405102	1 ml, 20 mg/ml; (in 50mM Tris-HCl (pH 8.0), 1 mM CaCl <sub>2</sub> , 50 % Glycerin)
405152	5 x 1 ml, 20 mg/ml, (in 50mM Tris-HCl (pH 8.0), 1 mM CaCl <sub>2</sub> , 50 % Glycerin)

VersionER 29.02.08

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### **Bioron**

Contact Germany Phone: +49-(0)-621- 5720 915

Contact Singapore Phone : +65 6896 8063

**E-Mail: [info@bioron.net](mailto:info@bioron.net)**

**Web: [www.bioron.net](http://www.bioron.net)**



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**Cat.-Nr.: 405002      200 mg**

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Version 1.2 01.03

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