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KpnI

Catalog #KPN-KE101

Product Component	Sizes
KpnI (20U/µL)	2000U / 20kU
10X Cut Reaction Buffer	800µL / 8mL

Storage/Transportation Condition Store at -20°C ± 5°C for up to 24 months. Avoid repeated freeze/thaw cycles. Transport on dry ice.
Form Liquid
Source *E.coli*
Storage Buffer 10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml recombinant Albumin, pH 7.4
10X Cut Reaction Buffer (200 mM Tris-acetate, 500 mM Potassium Acetate, 100 mM Magnesium Acetate, 1 mg/mL Recombinant Albumin, pH 7.9)
Concentration 20U/µL
Unit Definition One unit is defined as the amount of enzyme required to digest 1 µg of pXba DNA in 1 hour at 37°C in a total reaction volume of 50 µL.

Restriction Site
5'...GGTAC↓C...3'
3'...C↑CATGG...5'

Product Description
KpnI restriction enzyme recognizes GGTAC↓C sites and completes cleavage within 15 to 30 min at 37°C. Recombinant Albumin was added to the 10X Cut Reaction Buffer for stability and consistency. Isoschizomers for KpnI include Acc65I and Asp718I.

Quality Statement
This product is GMP-Ready, indicating that it is currently manufactured at industrial grade and can be moved to GMP-Grade manufacturing standards as necessary.

Applications
- Molecular Cloning
- Restriction site mapping
- Genotyping
- SNP

Recommended Protocol for Digestion
1. Make the reaction mixture according to the table below:

Reagent	Quantity
DNA	1 µg
10X Cut Reaction Buffer	5 µL
KpnI (20U/µL)	1 µL*
Nuclease-free H_2O	To 50 µL

*Add KpnI last. It is recommended that the volume of KpnI should not exceed 10% of the reaction volume as high glycerol concentration (>5% v/v) may cause star activity.

*KpnI is sensitive to heat inactivation, and it's recommended to purify DNA from the reaction mixture using DNA affinity column or phenol/chloroform extraction.

2. Mix gently and incubate at 37 °C for 15-30 minutes.

Notes
1. KpnI is not sensitive to dam, dcm or CpG methylation.
2. It is recommended to purify DNA sample before cleavage if there is contamination of phenol, chloroform, alcohol, EDTA or detergents which may interfere with restriction enzyme activity.