Restriction Enzymes BspQI

Cat#: 8052471

[Product Name]

Restriction Enzymes BspQI

[Model & Size]

Product Name	Cat No.	Size	Component No.	Component Name	Component Size	Quantity
Restriction Enzymes BspQI	8052471	500 units	8052471-1	Restriction Enzymes BspQI (10 units/μL)	500 units	1 bottle
			8052471-2	10×HN Buffer	1 mL	1 bottle

[Product Description]

BspQI is a Type IIS-type restriction enzyme that recognizes non-palindromic sequences and cleaves outside the recognition sequence. It is often used in Golden Gate assembly. Optimized reaction buffers maximize BspQI functionality and contain recombinant albumin, which enhances the stability of multiple enzymes.

[Restriction Enzyme Site]

5'...G C T C T T C $(N)_1$↓...3'

3'...C G A G A A G $(N)_4$↑...5'

Isoschizomers*: SapI, LguI, PciSI

***Isoschizomers may have different methylation sensitivities.**

[Storage And Transportation]

Store at -25℃~-15℃ for 24 months.

Transported on blue ice.

[Activity Definition]

1 unit is defined as the amount of enzyme required to digest 1 μg of λDNA in 50 μL the reaction at the optimal reaction temperature in 60 minutes.

[Recommended Reaction Conditions]

1× HN Buffer;

Incubate at 50℃;

Refer to "Protocol for Fast DNA Digestion" for reaction setup.

[Heat Inactivation]

Incubation at 80℃ for 20 minutes.

[Quality Control]

Prolonged Incubation / Star Activity Assay

At the optimal reaction temperature, a 50 μL reaction in HN Buffer containing 1 μg of λDNA and 10 units of BspQI incubated for 3 hours results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. Longer incubation may result in star activity.

Enzyme Digestion-Ligation-Redigestion Test

At the optimal reaction temperature, the DNA was digested using 10 units of BspQI, and then the

digestion product was recovered. The DNA fragments can be religated using an appropriate amount of T4 DNA Ligase at 22℃. After the ligation product is recovered again, the ligation product can be recut using BspQI.

Non-Specific DNase Activity

At the optimal reaction temperature, a 50 μL reaction containing 1μg of dsDNA fragments and 10 units of BspQI incubated for 16 hours results in no detectable degradation of the dsDNA fragments as determined by agarose gel electrophoresis.

[Operating Instruction]

1. Protocol for DNA Digestion

① Combine the following reaction components on ice in the order indicated:

	DNA
DNA[a]	≤ 2 μg
Restriction Enzymes BspQI (10 units/μL)	2~10 units
10× HN Buffer	5 μL
ddH_2O	Up to 50 μL

a. The DNA substrate should not contain phenol, chloroform, ethanol, EDTA, detergent or high-concentration salt, otherwise it will affect the activity of BspQI enzyme;

② Gently mix or flick the tube wall to mix well (never vortex), then centrifuge instantaneously to collect reaction solution;

③ Incubate at 50℃ for 15 minutes~1 hour;

④ Optional: Inactivate the enzyme by heating for 20 minutes at 80℃ or terminate the reaction through adsorption column or phenol/ch-loroform purificationto.

2. Double and Multiple Digestion of DNA

① The combined volume of the enzymes in the reaction mixture should not exceed 1/10 of the total reaction volume to avoid excessive glycerol in the enzyme causing star activity;

② If the enzymes require different reaction temperatures, start with the enzyme that requires a lower temperature, then add the second enzyme and incubate at the higher temperature.

[Number Of Recognition Sites In DNA]

λDNA	ΦX174	pBR322	pUC57	pUC18/19	SV40	M13mp18/19	Adeno2
10	1	1	1	1	0	0	7

[Methylation Effects On Digestion]

Dam	Dcm	CpG	EcoKI	EcoBI
No effect	No effect	No effect	No effect	No effect

[Icon Descriptions]

50 The enzyme's optimum reaction temperature is 50℃.

The enzyme can be heat inactivated at by incubation 80℃ for 20 minutes.

★ 3 hours incubation do not show star activity, but longer incubation may result in star activity.

[Description Of Product Symbol]

Product Symbol	Description	Product Symbol	Description
REF	Catalog Number	LOT	Batch Code
	Date of Manufacture		Manufacturer
	Keep away from light		Temperature limit

	Consult instructions for use		Use-by date

[Company Information]
Manufacturer and after-sales service unit Name: Shenzhen Dakewe Bio-engineering Co., Ltd.
Website: www.dakewe.com
Telephone: (86-755) 86235300
Email: RD@dakewe.com
Address: Room 702-703, Building No.1, Shenzhen Biomedicine Innovations Industrial Park, No.14 Jinhui Road, Kengzi Street, Pingshan District, Shenzhen, China
After-sales service telephone: (86-755) 86235300
Zip Code: 518122