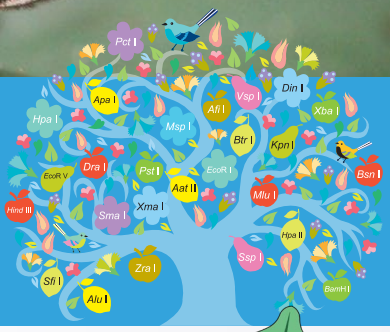
vivantis

Restriction Endonucleases

RESTRICTION Endonucleases

We Plant A TREE OF PLENTY, for your RESEARCH NEED



At Vivantis Technologies, we take pride in being the one stop solution to the scientific community in molecular biology research, providing an extensive selection of products to ensure our customers needs are met. As a testament to this, we supply a truly diverse range of restriction endonucleases to cater to the needs of researchers around the world. From the most commonly used restriction enzymes to their rare counterparts, Vivantis Technologies has the right DNA digestion tools that will cater to your research needs.

A

Aat II
*Acc*16 I
**Acc*65 I
*Acc*B1 I
*Acc*B7 I
*Acc*BS I
Acl I
Acs I
Afi I
**Ahl* I
**Alu* I
*Ama*87 I
**Apa* I
**Asi*G I
*Asp*A2 I
*Asp*LE I
*Asp*S9 I
*Asu*HP I
*Asu*NH I

B

**Bam*H I
*Bbv*12 I
**Bgl* I
**Bgl* II
*Bmc*A I
*Bme*18 I
*Bme*R I
Bmi I
*Bmr*F I
Bmt I
*Bpu*10 I
*Bse*X3 I
*Bsh*V I
Bsn I
*Bso*31 I
*Bsp*13 I
*Bsp*1720 I
*Bsp*19 I
*Bss*M I
*Bpu*14 I
*Bpu*M I
*Bpv*U I
*Bse*1 I
*Bse*118 I
*Bse*21 I
*Bse*3D I
*Bse*8 I
*Bse*P I
*Bss*N I
*Bss*NA
*Bss*T1 I
*Bst*2B I
*Bst*2U I
*Bst*4C I
*Bst*6 I
*Bst*AU I
*Bst*BA I
*Bst*DE I
*Bst*DS I
*Bst*EN I
*Bst*F5 I
*Bst*FN I
*Bst*H2 I
*Bst*HH I
**Bst*MA I
*Bst*MB I
*Bst*MC I
*Bst*NS I
*Bst*PA I
*Bst*SN I
*Bst*V2 I
*Bst*X I
*Bst*X2 I
Btr I

C

*Btu*M I
*Cci*N I

D

Din I
Dra I
Dra III
*Dse*D I

E

*Eco*ICR I
**Eco*R I
**Eco*R V
Erh I

F

**Fau*ND I
Fbl I
Fok I
*Fri*O I

H

Hind II
**Hind* III
**Hinf* I
**Hpa* I
Hpa II
*Hsp*A I

K

Kpn I
*Ksp*22 I

M

Mbo II
Mhl I
**Mlu* I
Mnl I
*Mro*N I
*Mro*X I
Msp I
*Msp*20 I
*Msp*A1 I

P

**Pce* I
Pct I
**Psp*124B I
*Psp*C I
*Psp*E I
*Psp*OM I
**Pst* I
Pvu II

R

Rsa I
*Rsr*2 I

S

**Sal* I
Sbf I
*Sfa*N I
Sfi I
**Sfr*274 I
*Sfr*303 I
**Sma* I
Smi I
*Smi*M I
**Sph* I
*Sse*9 I
Ssp I

T

Taq I
*Tru*9 I
*Tth*111 I

V

*Vha*464 I
Vne I
Vsp I

X

**Xba* I
Xma I

Z

Zra I
*Zsp*2 I

Find out the Recognition Sequence and more information at www.vivantechnologies.com.
** Vivantis Fast Digest Restriction Endonucleases are available.*

www.vivantechnologies.com

Pairing Nature with Scientific Discoveries

Conventional Restriction Endonucleases

Color-tag Buffer System

Our Color-Tag buffers are supplied at 10X concentration together with the restriction endonucleases. The buffers are stored in color-coded tubes corresponding in color to the cap of its restriction storage tube. This Color-Tag buffer system ensures convenience and highest performance. Our Buffers have been subjected to stringent analysis for maximum usage across our entire line of restriction endonuclease.

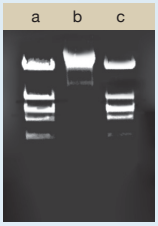
Overdigestion Assay

The absence of detectable levels of non-specific nucleases is demonstrated by incubating different amounts of the restriction endonuclease for 16 hours with 1µg of substrate DNA under optimum assay conditions. The banding pattern generated must be identical to the normal banding pattern produced at 1 hour digestion of the enzyme being tested.

Agarose Gel Photo (0.7%)
Lambda DNA digested with 10u of AatII for
(a) 1 hour
(b) 16 hours

Ligation And Recutting Assay

This assay is to demonstrate the absence of detectable levels of phosphatase and exonuclease. DNA fragment are produced by an excessive over-digestion of substrate DNA with each restriction endonuclease. These fragments are then ligated with T4 ligase. The ligated fragments are then recut with the same restriction endonuclease. Ligation can only occur if the 5' and 3' termini are left intact, and only those molecules with a perfectly restored recognition site can be recleaved. A normal banding pattern after cleavage indicates that both the 5' and 3' termini are intact and that the enzyme preparation is free of detectable phosphatase and exonuclease.



Agarose Gel Photo (0.7%)
Lambda DNA digested with
(a) EcoRI
(b) Fragments ligated with T4 DNA Ligase
(c) Ligated DNA redigested with EcoRI

Fast Digest Restriction Endonucleases (FDRE)

Universal buffer

Complete digestion in 5-15 minutes

100% digestion activity

Hassle-free Restriction Digestion

- NO MORE long incubation time and overnight digestions
- NO MORE various color tag buffer system
- NO MORE dilution
- NO MORE star activity

Vivantis Fast Digest Restriction Endonucleases (FDRE) are the advanced version of conventional restriction endonucleases hosted with a variety of 24 enzymes - designed for rapid DNA digestion within 5-15 minutes. The fast digest restriction endonucleases are suitable for complete digestion of different DNA types, including lambda DNA, plasmid DNA, genomic DNA as well as downstream PCR products.

Each Fast Digest Restriction Endonuclease is supplied with universal buffer, Buffer FD (Buffer Fast Digest), which does not limit multiple digestions of the Fast Digest Restriction Endonucleases. All Fast Digest Restriction Endonucleases are 100% active in Buffer FD, which allows any combination of Fast Digestion Restriction Enzymes to work simultaneously in one reaction tube.

Fast Digest Restriction Endonucleases are experimentally tested and proven to have the same performance as per conventional restriction endonucleases – with lesser reaction times which greatly improve restriction digestion.

Comparison Between Vivantis Conventional RE & Fast Digest RE

	Conventional Restriction Endonuclease	Fast Digest Restriction Endonuclease (FDRE)
Incubation time	1 hour – 16 hours	5 – 15 minutes
Buffer system	Up to 15 color-tag reaction buffers (eg. Buffer V1, V2, UB1x, etc)	• One universal buffer (Buffer FD) • Act as a reaction buffer & universal buffer, suitable for all types of fast digest RE • Able to perform double & multiple digestion of any combination of fast digest RE
Double/ multiple restriction digestion	Limited due to buffer incompatibility	No limit – all 24 Fast Digest Restriction Endonucleases are 100% active in one universal buffer
Dilution step	Dilution is optional depending on experiment	NO dilution required
Activity definition	1 unit of restriction enzyme is required to digest 1µg of DNA in 1 hour at optimum temperature in 50µl of assay buffer.	1µl of restriction enzyme is required to digest 1µg of DNA within 15 minutes at optimum temperature in 20µl or 50µl of assay buffer

Vivantis Technologies Sdn. Bhd.
Vivantis Technologies
General Enquiries: info@vivantechnologies.com
Technical Support: vivalab@vivantechnologies.com