

Certificate of Analysis

MULTI-CORE™ Buffer Pack:

Part No.	Size
R999A	0.25ml
R999B	1ml

Description: The MULTI-CORE™ Buffer Pack contains Promega's universal restriction enzyme 10X buffer.

Composition: The MULTI-CORE™ 10X Buffer has a composition of 250mM Tris acetate (pH 7.8 at 25°C), 1M potassium acetate, 100mM magnesium acetate and 10mM DTT.

Storage Temperature: Store at -20°C. Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes. See the expiration date on the Product Information Label.

Usage Note: Concentration gradients may form in frozen products and should be dispersed upon thawing. Mix well prior to

MULTI-CORE™ Buffer Pack

REF R9991

LOT 0000285781

-30°C -10°C

2022-06-10

Dispensed Lot#: 0000261191

3 x 1ml

For Research Use

Country of Origin: USA

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711-5399 USA



ADR9991 00002857819

PEEL
HERE

Quality Control Assays

Contaminant Activity

Endonuclease Assay: To test for endonuclease activity, 1µg of Type I supercoiled plasmid DNA is incubated with 1X buffer for two hours at 37°C. Following incubation, the supercoiled DNA is visualized on an ethidium bromide-stained agarose gel to verify the absence of visible nicking or cutting. The minimum passing specification is $\pm 10\%$ change in Type I DNA.

Exonuclease Assay: To test for DNase activity, 50ng of ^3H -labeled DNA is incubated with 1X buffer for two hours at 37°C, and the release of radiolabeled nucleotides is monitored by scintillation counting of TCA-precipitable and TCA-soluble material. Minimum passing specification is $<1\%$ release for DNase.

Magnesium Assay: The assay specification is $\pm 10\%$ of a 1mM standard for buffer diluted to 1mM magnesium.

pH Assay: The pH assay specification is ± 0.15 pH units at 25°C.

Conductivity: The conductivity specification is $\pm 10\%$ of 119µmho.

Functional Assay: All buffers are tested for use in restriction enzyme activity assays. For each lot, the restriction enzyme activity assay must be within 10% of that of the previous lot.



Promega

Promega Corporation

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Product claims are subject to change. Please contact Promega Technical Services or access the Promega online catalog for the most up-to-date information on Promega products.

Part# 9PIR999
Printed in USA. Revised 8/16.

Signed by:

R. Wheeler, Quality Assurance

This table may be used to select the best buffer for digestions with multiple restriction enzymes. Enzyme activity is expressed as a percent of the activity obtained with the optimized buffer for each enzyme.



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Relative Activity of Restriction Enzymes in Promega's 10X Buffers.

Promega Enzyme	Buffer Supplied with Enzyme	Enzyme Activity in the Promega 4-CORE® Buffers					Enzyme Assay Temperature
		A	B	C	D	MULTI-CORE™ Buffer	
AatII	J	50-75%	10-25%	<10%	<10%	<10%	37 C
AccI	G	50-75%	25-50%	25-50%	10-25%	25-50%	37 C
AccIII	F	<10%	10-25%	25-50%	25-50%	<10%	65 C
Acc65I	D	10-25%	50-75%	75-100%	100%	100%	37 C
AccB7I	E	10-25%	50-75%	100%	<10%	100%	37 C
AgeI	K	25-50%	25-50%	25-50%	50-75%	100%	37 C
AluI	B	75-100%	100%	75-100%	10-25%	10-25%	37 C
Alw26I	C	10-25%	25-50%	100%	10-25%	75-100%	37 C
Alw44I	C	<10%	25-50%	100%	25-50%	100%	37 C
Apal	A	100%	50-75%	50-75%	<10%	75-100%	37 C
Aval	B	10-25%	100%	50-75%	25-50%	<10%	37 C
Avall	C	50-75%	50-75%	100%	25-50%	25-50%	37 C
Ball	G	10-25%	<10%	<10%	<10%	<10%	37 C
BamHI	E	75-100%	75-100%	75-100%	50-75%	75-100%	37 C
BanI	G	25-50%	25-50%	10-25%	<10%	100%	50 C
BanII	E	75-100%	75-100%	75-100%	25-50%	100%	37 C
BbuI	A	100%	75-100%	75-100%	<10%	100%	37 C
BclI	C	10-25%	75-100%	100%	50-75%	10-25%	50 C
BglI	D	10-25%	25-50%	75-100%	100%	100%	37 C
BglII	D	25-50%	75-100%	75-100%	100%	<10%	37 C
BsaMI	D	10-25%	25-50%	50-75%	100%	25-50%	65 C
BsaOI	C	10-25%	50-75%	100%	25-50%	100%	50 C
Bsp1286I	A	100%	50-75%	25-50%	10-25%	75-100%	37 C
BsrBRI	H	10-25%	50-75%	100%	50-75%	100%	65°C
BsrSI	D	10-25%	25-50%	10-25%	100%	100%	65°C
BssHII	H	75-100%	50-75%	75-100%	50-75%	75-100%	50 C
Bst71I	D	10-25%	25-50%	25-50%	100%	10-25%	50 C
Bst98I	D	<10%	10-25%	10-25%	100%	25-50%	37°C
BstEII	D	25-50%	50-75%	50-75%	100%	100%	60 C
BstOI	C	10-25%	25-50%	100%	25-50%	<10%	60 C
BstXI	D	<10%	10-25%	25-50%	100%	10-25%	50 C
BstZI	D	<10%	<10%	10-25%	100%	10-25%	50 C
Bsu36I	E	<10%	25-50%	50-75%	25-50%	50-75%	37 C
CfoI	B	75-100%	100%	75-100%	25-50%	100%	37 C
ClaI	C	75-100%	75-100%	100%	75-100%	100%	37 C
CspI	K	<10%	10-25%	25-50%	50-75%	10-25%	30 C
Csp45I	B	25-50%	100%	50-75%	25-50%	50-75%	37 C
DdeI	D	25-50%	25-50%	50-75%	100%	25-50%	37 C
DpnI	B	50-75%	100%	75-100%	50-75%	100%	37 C
DraI	B	75-100%	100%	75-100%	50-75%	25-50%	37 C
EclHKI	E	<10%	<10%	75-100%	10-25%	50-75%	37 C
Eco47III	D	<10%	25-50%	50-75%	100%	25-50%	37 C
Eco52I	L	<10%	<10%	10-25%	25-50%	<10%	37 C
EcoICRI	B	10-25%	100%	75-100%	<10%	100%	37 C
EcoRI	H	25-50%	50-75%	50-75%	50-75%	100%	37 C
EcoRV	D	10-25%	25-50%	50-75%	100%	100%	37 C
FokI	B	75-100%	100%	75-100%	25-50%	50-75%	37 C
HaeII	B	50-75%	100%	50-75%	10-25%	100%	37 C
HaeIII	C	75-100%	75-100%	100%	50-75%	100%	37 C
HhaI	C	50-75%	75-100%	100%	50-75%	75-100%	37 C
HincII	B	25-50%	100%	25-50%	50-75%	100%	37 C
HindIII	E	25-50%	100%	75-100%	10-25%	50-75%	37 C

Promega Enzyme	Buffer Supplied with Enzyme	Enzyme Activity in the Promega 4-CORE® Buffers					Enzyme Assay Temperature
		A	B	C	D	MULTI-CORE™ Buffer	
HinfI	B	50-75%	100%	75-100%	75-100%	50-75%	37 C
HpaI	J	25-50%	50-75%	25-50%	10-25%	100%	37 C
HpaII	A	100%	50-75%	50-75%	10-25%	100%	37 C
Hsp92I	F	10-25%	75-100%	50-75%	25-50%	10-25%	37°C
Hsp92II	K	10-25%	25-50%	25-50%	<10%	<10%	37°C
I-PpoI	I-PpoI	10-25%	25-50%	25-50%	25-50%	-	37 C
KpnI	J	100%	25-50%	25-50%	<10%	75-100%	37 C
MboI	C	10-25%	75-100%	100%	50-75%	<10%	37 C
MbolI	B	10-25%	100%	50-75%	75-100%	100%	37 C
MluI	D	10-25%	25-50%	50-75%	100%	10-25%	37 C
MspI	B	75-100%	100%	75-100%	25-50%	25-50%	37 C
MspAII	C	25-50%	100%	100%	10-25%	100%	37 C
NaeI	A	100%	50-75%	25-50%	<10%	50-75%	37°C
NarI	G	75-100%	50-75%	75-100%	25-50%	50-75%	37 C
NciI	B	100%	100%	25-50%	25-50%	50-75%	37 C
NcoI	D	50-75%	75-100%	75-100%	100%	75-100%	37 C
NdeI	D	<10%	<10%	25-50%	100%	25-50%	37 C
NgoMI	MULTI-CORE™	100%	100%	100%	<10%	100%	37°C
NheI	B	75-100%	100%	75-100%	10-25%	100%	37 C
NotI	D	<10%	10-25%	25-50%	100%	25-50%	37 C
NruI	K	<10%	<10%	<10%	50-75%	10-25%	37 C
NsiI	D	10-25%	50-75%	50-75%	100%	10-25%	37 C
PstI	H	10-25%	50-75%	50-75%	50-75%	25-50%	37 C
PvuI	D	10-25%	25-50%	50-75%	100%	<10%	37 C
PvuII	B	25-50%	100%	50-75%	25-50%	50-75%	37 C
RsaI	C	75-100%	75-100%	100%	<10%	<10%	37 C
SacI	J	75-100%	25-50%	25-50%	<10%	100%	37 C
SacII	C	100%	50-75%	100%	50-75%	<10%	37 C
Sall	D	<10%	10-25%	25-50%	100%	<10%	37 C
Sau3AI	B	25-50%	100%	75-100%	<10%	100%	37 C
Sau96I	C	25-50%	25-50%	100%	50-75%	50-75%	37 C
Scal	K	<10%	100%	50-75%	75-100%	10-25%	37 C
SfiI	B	75-100%	100%	75-100%	25-50%	75-100%	50 C
SgfI	C	25-50%	25-50%	100%	<10%	<10%	37 C
SinI	A	100%	75-100%	50-75%	10-25%	100%	37 C
SmaI	J	<10%	<10%	<10%	<10%	100%	25 C
SnaBI	B	50-75%	100%	50-75%	<10%	100%	37 C
SpeI	B	75-100%	100%	75-100%	75-100%	100%	37 C
SphI	K	75-100%	75-100%	100%	75-100%	10-25%	37 C
SspI	E	10-25%	50-75%	50-75%	75-100%	50-75%	37 C
StuI	B	75-100%	100%	75-100%	50-75%	50-75%	37 C
StyI	F	25-50%	75-100%	75-100%	75-100%	<10%	37 C
TaqI	E	10-25%	25-50%	50-75%	50-75%	100%	65 C
Tru9I	F	75-100%	50-75%	75-100%	25-50%	25-50%	65 C
Tth11I	B	50-75%	100%	75-100%	25-50%	100%	65 C
VspI	D	<10%	25-50%	75-100%	100%	<10%	37 C
XbaI	D	50-75%	75-100%	75-100%	100%	100%	37 C
XhoI	D	25-50%	75-100%	75-100%	100%	10-25%	37 C
XhoII	C	25-50%	25-50%	100%	10-25%	<10%	37 C
XmaI	B	50-75%	100%	25-50%	<10%	50-75%	37 C
XmnI	B	75-100%	100%	75-100%	10-25%	75-100%	37 C