

# Performance Chart for Restriction Enzymes



Enzyme	Supplied NEBuffer	r1.1	r2.1	r3.1	rCutSmart	Inact. Temp. (°C)	Inact. Temp. (°C)	Dil.	Unit Substrate	Methylation Sensitivity	Notes
AclI	rCutSmart	<10	50*	50	100	37*	80*	B	λ DNA		2a
Acc65I	r3.1	10	75*	100	25	37*	65*	A	pBCC DNA	100	2a
AccI	rCutSmart	50	50	10	100	37*	80*	A	λ DNA		2a
AcII	rCutSmart	<10	25	100	100	37*	65*	A	λ DNA		2a
AcII	rCutSmart	<10	<10	<10	100	37*	No	B	λ DNA		1, b, d
AccuI	rCutSmart	50	100	50	100	37*	65*	B	λ DNA		2a
AlaI	rCutSmart	25	100	25	100	37*	65*	B	pXba DNA		2a
AluI	rCutSmart	50	100	10	100	37*	65*	A	φX174 RF I DNA		2a
AluI	r3.1	10	50	100	50	37*	80*	B	λ DNA		2a
AgeI-HF	rCutSmart	100	50	10	100	37*	65*	A	λ DNA		2a
AhdI	rCutSmart	25	25	10	100	37*	65*	A	λ DNA		2a
AleI-v2	rCutSmart	<10	<10	<10	100	37*	65*	B	λ DNA		2a
AluI	rCutSmart	25	100	50	100	37*	80*	B	λ DNA		b
AlwI	rCutSmart	50	50	10	100	37*	No	A	λ DNA (dam-)	100	1, b, d
AlwI	rCutSmart	10	100	50	100	37*	80*	A	λ DNA		2a
Apal	rCutSmart	25	25	<10	100	37*	65*	A	pXba DNA		2a
ApalI	rCutSmart	100	100	10	100	37*	No	A	λ DNA (HindIII digest)		2a
ApaKI	r3.1	25	50	100	10	75*	No	B	λ DNA		2a
ApaI-HF	rCutSmart	10	100	10	100	37*	80*	B	λ DNA		2a
AseI	rCutSmart	<10	10	10	100	37*	80*	A	λ DNA		2a
AseI	r3.1	<10	50*	100	10	37*	65*	B	λ DNA		3
AsuI	rCutSmart	100	100	25	100	37*	80*	B	XbaI digested pXba		2a, b
AvaI	rCutSmart	<10	100	25	100	37*	80*	A	λ DNA		2a
AvaII	rCutSmart	50	75	10	100	37*	80*	A	λ DNA		2a
AvrII	rCutSmart	100	50	50	100	37*	No	B	λ DNA (HindIII digest)		2a
BaeGI	r3.1	75	75	100	25	37*	80*	A	λ DNA		2a
BaeI	rCutSmart	50	100	50	100	37*	65*	A	λ DNA		2a, e
BamBI	r3.1	75*	100*	100*	100*	37*	No	A	λ DNA		3
BamHI-HF	rCutSmart	100	50	10	100	37*	No	A	λ DNA		2a
BanI	rCutSmart	10	25	<10	100	37*	65*	A	λ DNA		1
BanI	rCutSmart	100	100	50	100	37*	80*	A	λ DNA		2
BbsI	r2.1	100	100	25	75	37*	65*	B	λ DNA		2a
BbsI-HF	rCutSmart	10	10	10	100	37*	65*	B	λ DNA		2a
BbvCI	rCutSmart	10	100	50	100	37*	No	B	λ DNA		1, a
BbvI	rCutSmart	100	100	25	100	37*	65*	B	pBR322 DNA		3
BclI	rCutSmart + DTT	100	50	10	100	37*	65*	A	pXba DNA		3, b
BcoI	r3.1	100*	100*	100*	100*	37*	65*	A	pBR322 DNA		2a
BcgI	r3.1	10	75*	100	50*	37*	65*	A	λ DNA		2a, e
BclVI	rCutSmart	100	25	<10	100	37*	80*	C	λ DNA		b
BclI	r3.1	50	100	100	75	37*	No	A	λ DNA (dam-)		2a
BclI-HF	rCutSmart	100	100	10	100	37*	65*	B	λ DNA (dam-)		2a
BcoII	rCutSmart	50	75	75	100	37*	No	B	λ DNA		2a
BfuI	rCutSmart	<10	<10	<10	100	37*	80*	B	λ DNA		2, b
BfuAI	r3.1	<10	25	100	10	50*	65*	B	λ DNA		3
BglI	r3.1	10	25	100	10	37*	65*	B	λ DNA		2a
BglII	r3.1	10	10	100	<10	37*	No	A	λ DNA		d
BglI	rCutSmart	50	100	10	100	37*	No	A	λ DNA		d
BmpBI	r3.1	<10	<10	100	10	37*	65*	B	λ DNA		2a, 3, b, d
BmrI	r2.1	75	100	75	100*	37*	65*	B	λ DNA (HindIII digest)		b
BmrI-HF	rCutSmart	50	100	10	100	37*	65*	B	pXba DNA		2a
BpmI	r3.1	75	100	100	25	37*	65*	B	λ DNA		2, b
Bpu10I	r3.1	10	25	100	25	37*	80*	B	λ DNA		3, b, d
BpuIE	rCutSmart	50*	100*	50*	100*	37*	65*	B	λ DNA		2a
BqAI	rCutSmart	100	100	100	100	37*	No	C	λ DNA		2a
BsaBI	rCutSmart	50	100	75	100	60*	80*	B	λ DNA (dam-)	100	2
BsaHI	rCutSmart	50	100	100	100	37*	80*	C	λ DNA		2a
BsaI-HFv2	rCutSmart	100	100	100	100	37*	80*	B	pXba DNA		2a
BsalI	rCutSmart	50	100	50	100	60*	80*	A	λ DNA		2a
BsaWI	rCutSmart	10	100	50	100	60*	80*	A	λ DNA		2a
BsaXI	rCutSmart	50*	100*	100*	100*	37*	No	C	λ DNA		e
BseRI	rCutSmart	100	100	75	100	37*	80*	A	λ DNA		d
BspMI	r3.1	10	50	100	50	37*	80*	B	λ DNA		2a, d
BspI	rCutSmart	25	50	<10	100	37*	65*	B	λ DNA		d
BseI	rCutSmart	25	50	<10	100	60*	No	A	λ DNA		2a
BstKAI	rCutSmart	25	100	100	100	65*	No	A	λ DNA		2a
BsuWI	r3.1	25	50*	100	25	55*	80*	B	φX174 DNA		2a
BsuWI-HF	rCutSmart	50	100	10	100	37*	80*	B	φX174 DNA		2a
BstI	rCutSmart	50	75	100	100	37*	No	A	λ DNA		2a, b
BstAI	rCutSmart	50	100	100	100	37*	No	A	λ DNA		2a
BmbI-v2	r3.1	<10	50	100	25	55*	80*	B	λ DNA		2a
BmrI	rCutSmart	25	50	50	100	37*	80*	A	pBR322 DNA		1
BsuI	rCutSmart	25	100	<10	100	65*	80*	A	λ DNA		2a
BsuBI	rCutSmart	25	100	100	100	37*	80*	A	λ DNA		2a
BspI286I	rCutSmart	25	25	25	100	37*	65*	A	λ DNA		3
BspCNI	rCutSmart	100	75	10	100	37*	80*	A	λ DNA		2a
BspDI	rCutSmart	25	75	50	100	37*	80*	A	λ DNA		2a
BspCI	r3.1	<10	10	100	<10	37*	80*	B	λ DNA (dam-)	100	2a
BspHI	rCutSmart	10	50	25	100	37*	80*	A	λ DNA		2a
BspMI	r3.1	10	50*	100	10	37*	65*	B	λ DNA		2a
BspQI	r3.1	100*	100*	100*	100*	50*	80*	B	λ DNA		3
BspQI-HF	rCutSmart	10	50	25	100	37*	80*	B	λ DNA		2a
BsrBI	rCutSmart	50	100	100	100	37*	80*	A	λ DNA		2a, d
BsrDI	r2.1	10	100	75	25	37*	80*	A	λ DNA		3, d
BsrFI-v2	rCutSmart	25	25	0	100	37*	No	C	pBR322 DNA		2a
BspI-HF	rCutSmart	10	100	100	100	37*	80*	A	λ DNA		2a
BsrI	r3.1	<10	50	100	10	65*	80*	B	φX174 DNA		b
BssHII	rCutSmart	100	100	100	100	37*	65*	B	λ DNA		2a
Bss3I-v2	rCutSmart	10	25	<10	100	37*	No	B	λ DNA		2a
BstAPI	rCutSmart	50	100	25	100	60*	80*	A	λ DNA		2a, b
BstBI	rCutSmart	75	100	10	100	65*	No	A	λ DNA		2a

Enzyme	Supplied NEBuffer	r1.1	r2.1	r3.1	rCutSmart	Inact. Temp. (°C)	Inact. Temp. (°C)	Dil.	Unit Substrate	Methylation Sensitivity	Notes
Bbs9-HF	rCutSmart	<10	10	<10	100	37*	No	A	λ DNA		a
BbsNI	r3.1	10	100	100	75	60*	No	A	λ DNA		b
BbsUI	rCutSmart	50	100	25	100	60*	No	A	λ DNA		2a, b
BbsXI	r3.1	<10	50	100	25	37*	80*	B	λ DNA		3
BbvI	rCutSmart	25	100	75	100	60*	No	A	λ DNA		2a
Bbs217I-HF	rCutSmart	100	100	10	100	37*	No	A	λ DNA		2a
Bbs9I	rCutSmart	25	100	100	100	37*	80*	C	λ DNA (HindIII digest)		b
BglI	rCutSmart	50	100	100	100	37*	80*	B	pBR322 DNA		2a
Bgl2I	rCutSmart	10	25	<10	100	60*	80*	A	λ DNA		2a, 3, b, d
BbsCI	rCutSmart	10	100	25	100	50*	80*	B	λ DNA		2a
BbsI-v2	rCutSmart	100	100	25	100	37*	No	A	λ DNA		1
BbsIMultI	rCutSmart	100	50	10	100	55*	80*	A	pUC19 DNA		2a
CasDI	rCutSmart	50	75	100	100	37*	65*	B	λ DNA		2a, b
ClaI	rCutSmart	10	50	50	100	37*	65*	A	λ DNA (dam-)	100	2a
CspCI	rCutSmart	10	100	10	100	37*	65*	A	λ DNA		e
Cvu9I	rCutSmart	25	100	100	100	37*	No	A	pBR322 DNA		1, b
Cvu9I	r3.1	75	100*	100*	75*	25*	No	C	λ DNA		b
DdeI	rCutSmart	75	100	100	100	37*	65*	B	λ DNA		2a
DpnI	rCutSmart	100	100	75	100	37*	80*	B	pBR322 DNA (dam methylated)		2a, b
DpnII	U	25	25	100*	25	37*	65*	B	λ DNA (dam-)	100	2a
DraI	rCutSmart	75	75	50	100	37*	65*	A	λ DNA		2a
DraIII-HF	rCutSmart	<10	50	10	100	37*	No	B	λ DNA		2a, b
DrdI	rCutSmart	25	50	10	100	37*	65*	A	pUC19 DNA		2a, 3
EaeI	rCutSmart	10	50	<10	100	37*	65*	A	λ DNA		2a, b
EagI-HF	rCutSmart	25	100	100	100	37*	65*	B	pXba DNA		2a
EcoI	rCutSmart	50	10	<10	100	37*	65*	B	λ DNA		2, b, d
EcoI	rCutSmart	100	50	50	100	37*	65*	A	λ DNA		2a
Eco53kI	rCutSmart	100	100	<10	100	37*	65*	A	pXba DNA		2a, 3, b
EcoNI	rCutSmart	50	100	75	100	37*	65*	A	λ DNA		b
Eco109I	rCutSmart	50	100	50	100	37*	65*	A	λ DNA (HindIII digest)	100	3
EcoP15I	U + ATP	75	100	100	100	37*	65*	A	pUC19 DNA		e
EcoRV	U	25	100*	50	50*	37*	65*	C	λ DNA		2a
EcoRV-HF	rCutSmart	10	100	<10	100	37*	65*	C	λ DNA		2a
EcoRV-HF	rCutSmart	25	100	100	100	37*	65*	B	λ DNA		2a
Esp3I	rCutSmart	100	100	<10	100	37*	65*	B	λ DNA		2a
FalI	r2.1	10	100	50	50	55*	80*	A	pUC19 DNA		2a
FauI	rCutSmart	100	50	10	100	55*	65*	A	λ DNA		2a, 3, b, d
Fnu94I	rCutSmart	<10	<10	<10	100	37*	No	A	λ DNA		2a
FokI	rCutSmart	100	100	75	100	37*	65*	A	λ DNA		2a, 3, b, d
FaeI	rCutSmart	100	75	<10	100	37*	65*	B	pBCC DNA		2a
FspI	rCutSmart	100	100	10	100	37*	No	C	λ DNA		2a, b
HaeIII	rCutSmart	25	100	10	100	37*	80*	A	λ DNA		2a
HaeIII	rCutSmart	50	100	25	100	37*	80*	A	λ DNA		2a
HgaI	r1.1	100	100	25	100*	37*	65*	A	φX174 DNA		2a, 1
HhaI	rCutSmart	25</									