

Restriction Enzymes

Single buffer system: One for All - All for One



Achieve 100 % enzyme activity and complete digestion in **JBS Universal Buffer (UB)**. Save time with **JBSpeed restriction enzymes**.



Restriction Enzyme	Cat.-No.	Units		Reaction Conditions			Heat inactivation	Recognition Sequence (5'→3')	Methylation sensitivity	Compatible cohesive ends	Alternative Reaction Buffers	
		S-pack	L-pack	Buffer concentration	Reaction time	Reaction temperature					Fermentas	NEB [®]
AccI	EN-E2004	500	5x 500	1x	60 min	37 °C	20 min @ 80 °C	GT↓MK AC	CpG	CviAI	B, Tango™	4, 1
AluI	EN-101	600	5x 600	1x	60 min	37 °C	20 min @ 65 °C	AG↓CT	-	[blunt]	B, G	2, 1
ApaI	EN-E2015	5000	5x 5000	1x	60 min	25 °C	20 min @ 65 °C	G GGCC↓C	CpG dcm	BanII, Bsp1286I	Tango™	4
ApaLI	EN-172	2000	5x 2000	0.5x	60 min	37 °C	-	G↓TGCA C	CpG dcm	SfiI	B, G	2, 1
AsuII	EN-102	3500	5x 3500	1x	60 min	37 °C	20 min @ 65 °C	TT↓CG AA	CpG	AccI, AclI, BsaHI, BstBI, ClaI, MspI, NarI, TaqI	G ^T	2 ^T
AvaI	EN-E2006	2000	5x 2000	1x	60 min	37 °C	20 min @ 65 °C	C↓YCGR G	CpG	-	G	2
AvaII	EN-E2007	1000	5x 1000	1x	60 min	37 °C	20 min @ 65 °C	G↓GWC C	CpG dcm dam	PpuMI	O	3
BamHI	EN-103	7500	5x 7500	1x	60 min	37 °C	20 min @ 80 °C	G↓GATC C	-	BclI, DpnII, BglII, BstYI	Tango™	4
BanII	EN-E2060	1000	5x 1000	1x	60 min	37 °C	20 min @ 65 °C	G RGCY↓C	-	ApaI	G	2
BclI	EN-104	2500	5x 2500	1x	60 min	50 °C	-	T↓GATC A	dam	BamHI, BstYI, BglII, MboI	O ^T	3 ^T
BglI	EN-105	2000	5x 2000	1x	60 min	37 °C	20 min @ 65 °C	GCCN NNN↓NGGC	CpG	-	O	3
BglII	EN-106	1300	5x 1300	1x	60 min	37 °C	-	A↓GATC T	-	BamHI, BstYI, BclI, DpnII	O ^T	3 ^T
BseAI	EN-107	650	5x 650	1x	60 min	55 °C	-	T↓CCGG A	CpG dcm dam	AgeI, Aval, AccIII, XmaI	G	2
BseBI	EN-108	4500	5x 4500	1x	60 min	60 °C	-	CC↓W GG	-	-	O	3
BseCI	EN-109	3500	5x 3500	1x	60 min	55 °C	-	AT↓CG AT	CpG dam	AccI, AclI, AclI, BsaHI, BstBI, ClaI, MspI, NarI, TaqI	Tango™, G	4, 2
BshFI	EN-110	7000	5x 7000	1x	60 min	37 °C	20 min @ 80 °C	GG↓CC	-	[blunt]	Tango™, ^T	4 ^T
BsiSI	EN-111	2200	5x 2000	1x	60 min	55 °C	-	C↓CG G	-	AccI, AclI, AclI, BsaHI, BstBI, ClaI, MspI, NarI, TaqI	O ^T	3 ^T
BssAI	EN-112	250	5x 250	1x	60 min	65 °C	-	R↓CCGG Y	-	-	O, B, G	3, 2, 4
BssHII	EN-E2115	200	5x 200	1x	60 min	50 °C	20 min @ 80 °C	G↓CGCC C	CpG	MluI, AscI	O ^T	3 ^T
BstEII	EN-144	1750	5x 1750	1x	60 min	60 °C	-	G↓GTNAC C	-	-	O, G	3, 2
BstXI	EN-E2118	1000	5x 1000	1x	60 min	50 °C	20 min @ 65 °C	CCAN NNNN↓NTGG	dcm	-	Ecl136 II Buffer	1
CspAI	EN-113	150	5x 150	1x	60 min	37 °C	20 min @ 65 °C	A↓CCGG T	-	AgeI, Aval, AccIII, XmaI	Tango™	4
DpnI	EN-160	200	5x 200	1x	60 min	37 °C	20 min @ 80 °C	GA↓TC	CpG	BamHI, BstYI, BclI, BglII	B, G, Tango™	2, 4
DraI	EN-E2145	2000	5x 2000	1x	60 min	37 °C	20 min @ 65 °C	TTT↓AAA	CpG EcoKI	[blunt]	Tango™, O ^T	EcoR I Buffer
EcoRI	EN-114	15000	5x 15000	1x	60 min	37 °C	20 min @ 65 °C	G↓AATT C	CpG	ApoI, MfeI	G	2
EcoRV	EN-115	3000	5x 3000	1x	60 min	37 °C	20 min @ 80 °C	GAT↓ATC	CpG	[blunt]	G ^T	2 ^T
FokI	EN-E2710	500	5x 500	1x	60 min	37 °C	20 min @ 65 °C	GGATGNNNNNNNN↓NNNN	CpG dcm	-	-	-
HincII	EN-E2200	1000	5x 1000	1x	60 min	37 °C	20 min @ 65 °C	GTY↓RAC	CpG EcoKI	-	G	2
HindIII	EN-116	7500	5x 7500	1x	60 min	37 °C	20 min @ 80 °C	A↓AGCT T	-	-	O	3
HinfI	EN-117	2500	5x 2500	1x	60 min	37 °C	20 min @ 80 °C	G↓ANT C	CpG	-	Tango™	4
HpaI	EN-118	750	5x 750	1x	60 min	37 °C	-	GTT↓AAC	CpG	[blunt]	B ^T	-
HpaII	EN-E2260	2000	5x 2000	1x	60 min	37 °C	20 min @ 65 °C	C↓CG G	CpG	AccI, AclI, ClaI, BstBI, TaqI, AclI, BsaHI, HinPII, NarI	B	2
KpnI	EN-119	3500	5x 3500	1x	60 min	37 °C	-	G GTAC↓C	-	-	B	4, 1
MboI	EN-120	300	5x 300	1x	60 min	37 °C	20 min @ 65 °C	↓GATC	CpG dam	BamHI, BstYI, BclI, BglII	O	3
MboII	EN-E2284	250	5x 250	1x	60 min	37 °C	20 min @ 65 °C	GAAGANNNNNNN↓N	CpG dam	-	G	2
MluI	EN-E2287	1000	5x 1000	1x	60 min	37 °C	20 min @ 65 °C	A↓CGCG T	CpG EcoKI	AscI, BssHII	O	3
MnlI	EN-E2289	250	5x 250	1x	60 min	37 °C	20 min @ 65 °C	CCTCNNNNNN↓N	CpG	-	B	1, 4
MspCI	EN-121	1300	5x 1300	2x	60 min	37 °C	20 min @ 65 °C	C↓TTAA G	-	AflII, SmlI	B	-
NaeI	EN-122	300	5x 300	1x	60 min	37 °C	20 min @ 65 °C	GCC↓GGC	CpG	[blunt]	O ^T	3 ^T
NarI	EN-E2291	200	5x 200	0.5x	60 min	37 °C	20 min @ 65 °C	GG↓CG CC	CpG	AccI, AclI, ClaI, BstBI, TaqI, AclI, HinPII, BsaHI, HpaII	G, Tango™	2, 4
NcoI	EN-123	600	5x 600	1x	60 min	37 °C	20 min @ 65 °C	C↓CATG G	-	BspHI, FatI, PciI	B, Tango™	4, 1
NdeI	EN-E2293	2000	5x 2000	1x	60 min	37 °C	20 min @ 65 °C	CA↓TA TG	-	AseI, BfaI, Csp6I, MseI	O ^T	3 ^T
NheI	EN-146	550	5x 550	1x	60 min	37 °C	20 min @ 65 °C	G↓CTAG C	CpG	AvrII, SpeI, StyI, XbaI	O	3
NotI	EN-124	300	5x 300	1x	60 min	37 °C	20 min @ 65 °C	GC↓GGCC GC	CpG	EagI, EaeI	G	2
NruI	EN-125	700	5x 700	1x	60 min	37 °C	20 min @ 65 °C	TCG↓CGA	CpG dam	[blunt]	O	3
PspPI	EN-126	900	5x 900	1x	60 min	25 °C	15 min @ 55 °C	G↓GNC C	dcm	-	O	3
PstI	EN-127	8000	5x 8000	1x	60 min	37 °C	15 min @ 55 °C	C TGCA↓G	-	NsiI, SbfI	G, O	2, 3
PvuI	EN-E2320	200	5x 200	1x	60 min	37 °C	20 min @ 80 °C	CG AT↓CG	CpG dam	AsiSI, PacI, BsiEI	G	2
PvuII	EN-128	4500	5x 4500	1x	60 min	37 °C	-	CAG↓CTG	-	[blunt]	Tango™	4
RsaI	EN-129	1000	5x 1000	1x	60 min	37 °C	20 min @ 65 °C	GT↓AC	CpG	[blunt]	(O)	(3)
Sall	EN-130	2000	5x 2000	2x	60 min	37 °C	20 min @ 65 °C	G↓TCGA C	CpG	PspXI, XhoI	G	2
Sau3AI	EN-150	500	5x 500	1x	60 min	37 °C	20 min @ 65 °C	↓GATC	CpG	BamHI, BclI, BglII, XhoII	O	3
Scal	EN-131	1200	5x 1200	1x	60 min	37 °C	20 min @ 80 °C	AGT↓ACT	-	[blunt]	G	2
SfiI	EN-132	400	5x 400	1x	60 min	50 °C	-	GCCN NNN↓NGGCC	CpG dcm	-	B ^T	2 ^T
SgrBI	EN-133	1600	5x 1600	1x	60 min	37 °C	20 min @ 65 °C	CC GC↓GG	CpG	BsiEI, SacII	Tango™	4
Slal	EN-134	5000	5x 5000	1x	60 min	37 °C	20 min @ 65 °C	C↓TCGA G	CpG	AvaI, Sall, SmlI, XhoI	O	3
SmaI	EN-135	1100	5x 1100	1x	60 min	25 °C	20 min @ 65 °C	CCC↓GGG	CpG	[blunt]	Tango™	4
SnaBI	EN-136	350	5x 350	1x	60 min	37 °C	20 min @ 80 °C	TAC↓GTA	CpG	[blunt]	Tango™	1
SpeI	EN-E2398	500	5x 500	1x	60 min	37 °C	20 min @ 65 °C	A↓CTAG T	CpG EcoKI	AvrII, NheI, StyI, XbaI	G	2
SphI	EN-137	250	5x 250	1x	60 min	37 °C	20 min @ 65 °C	G CATG↓C	-	NlaIII, NspI	G	2
SseBI	EN-138	1500	5x 1500	1x	60 min	37 °C	20 min @ 65 °C	AGG↓CCT	dcm	[blunt]	O	3
SspI	EN-139	600	5x 600	1x	60 min	37 °C	20 min @ 65 °C	AAT↓ATT	-	[blunt]	O ^T	3 ^T
SstI	EN-140	1600	5x 1600	1x	60 min	37 °C	20 min @ 65 °C	G AGCT↓C	-	BanII, SacI	B	(1,4)
StyI	EN-141	6000	5x 6000	2x	60 min	37 °C	20 min @ 65 °C	C↓CWGG G	-	AvrII	O	3
TaqI	EN-142	3500	5x 3500	1x	60 min	65 °C	20 min @ 80 °C	T↓CG A	dam	AccI, ClaI, BstBI, AclI, AclI, BsaHI, HinPII, HpaII, NarI	O ^T	3 ^T
Tth111I	EN-E2420	1000	5x 1000	1x	60 min	65 °C	-	GACN↓N NGTC	-	-	B	4, 1
XbaI	EN-143	3500	5x 3500	1x	60 min	37 °C	20 min @ 65 °C	T↓CTAG A	dam	AvrII, NheI, SpeI, StyI	G	2

Chart Legend

	JBSpeed enzyme (5-10 min reaction time)
	Cleavage inhibited/impaird by CpG methylation of recognition sequence (eukaryotic genome DNA)
	Cleavage inhibited/impaird by dcm methylation of recognition sequence (bacterial source DNA)
	Cleavage inhibited/impaird by dam methylation of recognition sequence (bacterial source DNA)
	Cleavage inhibited/impaird by EcoKI methylation of recognition sequence (bacterial source DNA)
	Potential inhibition by overlapping CpG methylation site
	Potential inhibition by overlapping dcm methylation site
	Potential inhibition by overlapping dam methylation site
	Potential inhibition by overlapping EcoKI methylation site
F	BSA should be added to a final concentration of 200 µg/ml to obtain optimal activity.
T	TX-100 should be added to the final concentration indicated on JBS datasheet to obtain optimal activity.

Nucleotide Single Letter Code

R = A or G, Y = C or T, M = A or C, K = G or T, S = C or G, W = A or T, H = A or C or T, B = C or G or T, V = A or C or G, D = A or G or T, N = A or C or G or T

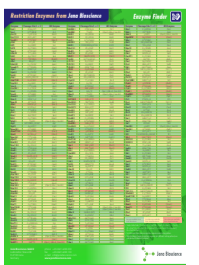
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