

pET-45b(+) Vector

Cat. No. 71327-3

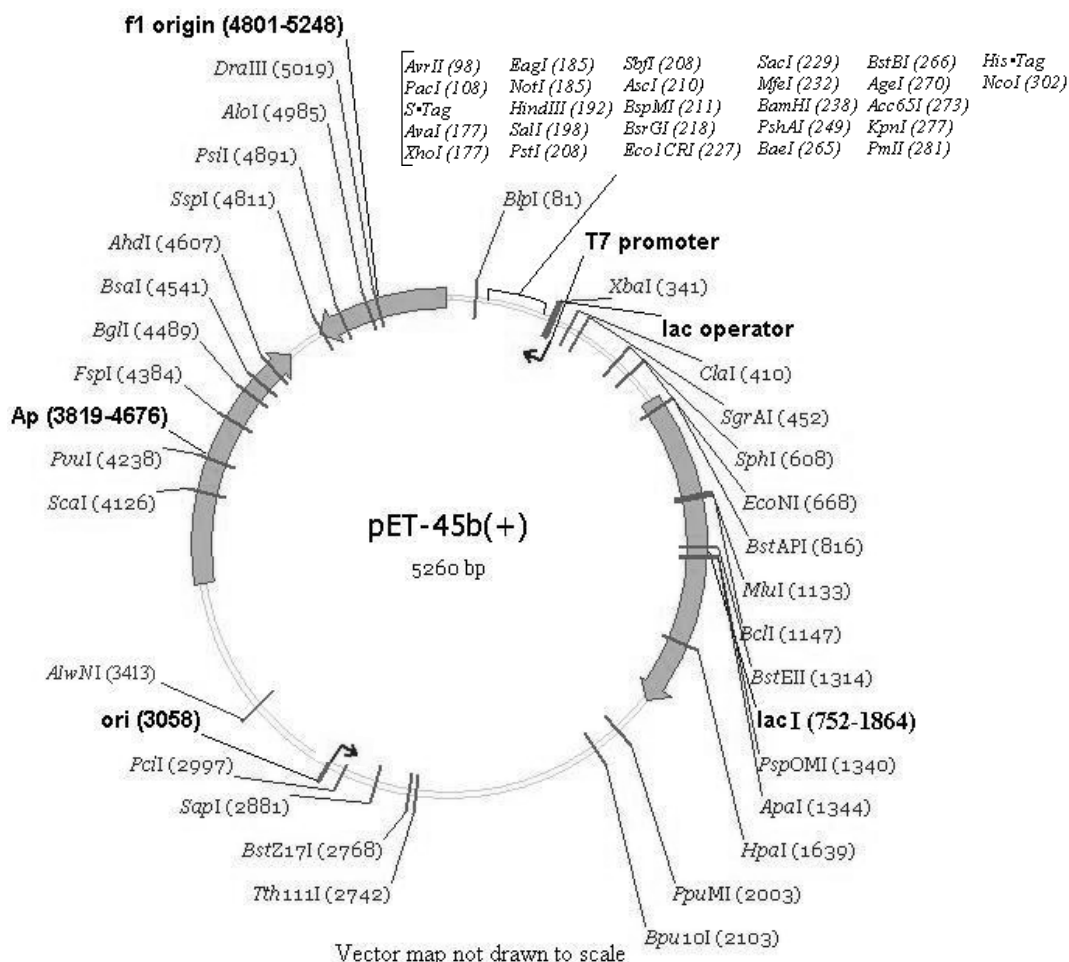
pET-45b(+) sequence landmarks

T7 promoter	375-391
T7 transcription start	374
His•Tag coding sequence	281-298
Multiple cloning sites	
(Nco I - Avr II)	97-306
STag coding sequence	125-169
T7 terminator	26-73
lacI coding sequence	752-1864
pBR322 origin	3058
bla (Ap ^R) coding sequence	3819-4676
f1 origin	4801-5248

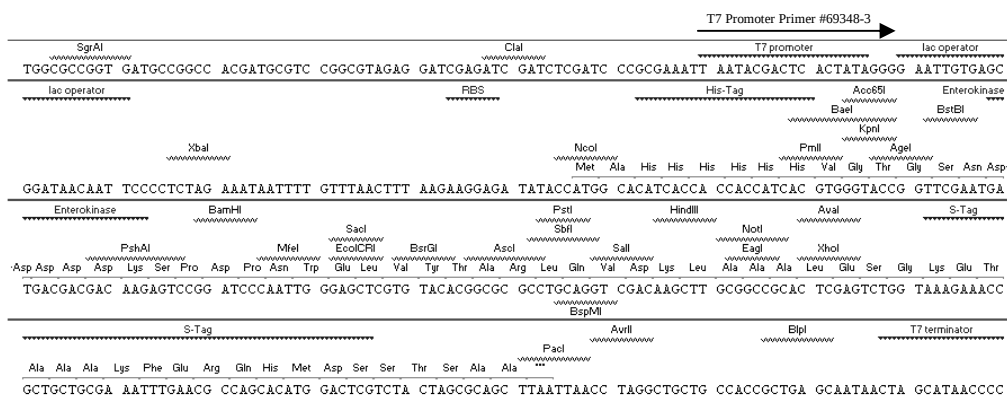
Notes

All corresponding maps and tables are generated using VectorNTI® software. Restriction sites are numbered in accordance with the conventions of the respective software.

The pET-45b(+) vector carries an N-terminal His•Tag® coding sequence followed by an enterokinase cleavage site and an optional C-terminal S•Tag™ sequence. Unique sites are shown on the circle map. Note that the sequence is numbered by the pBR322 convention, so the T7 expression region is reversed on the vector map. The f1 origin is oriented so that infection with helper phage will produce virions containing single-stranded DNA that corresponds to the coding strand. Therefore, single-stranded sequencing should be performed using the T7 Terminator Primer (Cat. No. 69337-3).



Vector map not drawn to scale



pET-45b(+) cloning expression region

USA and Canada

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bioscienceshelp@
emdchemicals.com

France

Freephone
0800 126 461

Germany

Freeccall
0800 100 3496

Europe

Ireland
Toll Free
1800 409 445

United Kingdom

Freephone
0800 622 935

All other

European Countries
+44 115 943 0840

All Other Countries

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bioscienceshelp@
emdchemicals.com

techservice@merckbio.eu

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Enzyme	#	Locations						Enzyme	#	Locations						Enzyme	#	Locations					
Acc65I	1	273						BsmFI	3	594	2268	5234				NcoI	1	302					
AccI	3	122	199	2767				BspI286I	12							NgoMIV	2	443	5120				
AcII	5	795	2322	4005	4378	4804		BspCNI	9	94	1718	2095	2257	2797		NotI	1	185					
AfeI	2									3285	3694	4119	4638			NspI	4	608	2342	2634	3001		
AflIII	2	1133	2997					BspEI	3	3	241	2186				NspV							
AgeI	1	270						BspHI	4	531	3717	3766	3798			PacI	1	108					
AhdI	1	4607						BspLU11I							PciI	1	2997						
AloI	1	4985						BspMI	1	211						PfiMI	3	137	284	715			
AlwNI	1	4313						BsrBI	4	362	2930	3764	5163			PfoI	2	700	2639				
ApaI	1	1344						BsrDI	4	1180	1546	4373	4547			PinAI							
ApaLI	4	1113	2811	3311	3935			BsrFI	6	270	443	452	819	4522		PmlI	1	281					
AscI	1	210								5120						PpiI	3	3712	3979	4985			
Asel	4	390	1818	1877	4432			BsrGI	1	218						PpuMI	1	2003					
AvaI	1	177						BssHII	2	210	1544					PshAI		249					
AvrII	1	98						BssSI	3	222	3170	3938				Psil	1	4891					
BaeI	1	265						Bst1107I								PspOMI	1	1340					
BamHI	1	238						BstAPI	1	816						PstI	1	208					
BanI	9	273	455	476	590	1053		BstBI	1	266						PvuI	1	4238					
		1772	1902	4654	5056			BstEII	1	1314						PvuII	3	1733	1826	2588			
BanII	5	229	517	531	1344	5094		BstXI	3	935	1064	1187				SacI	1	229					
BbeI	4	459	480	594	1776			BstYI	10	238	697	1909	2189	3638		SalI	1	198					
BbsI	3	1279	1618	2115						3649	3960	3977	4745	4757		SapI	1	2881					
BceAI	6	199	652	992	1619	3499		BstZ17I	1	2768						SbfI	1	208					
		5044						BtgI	2	302	570					ScaI	1	4126					
BcgI	4	179	1459	2574	4069			BtsI	4	1498	1866	4188	4208			SfcI	6	204	375	3262	3453	4361	
BciVI	3	1590	3200	3769				Clal	1	410							5238						
BclI	1	1147						DraI	3	4029	4721	4740				SfoI	4	457	478	592	1774		
BglI	0							DraIII	1	5019						SgrAI	1	452					
BlpI	1	81						DrdI	3	2690	3105	4974				SmlI	7	37	177	1926	3103	3365	
BmeI580I	5	1117	1344	2815	3315	3939		EaeI	5	185	441	573	1807	4214			3642	3982					
BmrI	6	662	1059	1296	1936	2736		EagI	1	185						SphI	1	608					
		4567						EarI	3	751	2881	3808				Sse8387I							
BpmI	4	941	1460	2524	4538			Ecil	4	924	3059	3205	4465			SspI	1	4811					
Bpu10I	1	2103						Ecl136II	1	227						StyI	3	58	98	302			
BpuEI	6	22	1947	3088	3386	3627		Ecil	4	924	3059	3205	4465			TaqII	5	1932	2899	4075	4260	4923	
		4003						Eco57MI	6	971	1460	2524	3545	3941		TatI	3	218	2801	4124			
BsaAI	3	281	2749	5019						4538						TspGWI	4	2122	2440	3826	4168		
BsaBI	3	406	416	2194				EcoICRI	1	227						Tth111I	1	2742					
BsaHI	6	456	477	591	1090	1773		EcoNI	1	668						XbaI	1	341					
		4067						EcoO109I	3	54	566	2003				XcmI	3	989	1505	1523			
Bsal	1	4541						FspI	1	4384						XhoI	1	177					
BsaWI	9	3	241	270	1452	1955		HaeI	4	861	3012	3023	3475			XmnI	2	2555	4007				
		2186	3203	3350	4311			HincII	2	200	1639												
BsaXI	3	241	1808	4983				HindIII	1	192													
BseYI	3	1532	1667	3301				HpaI	1	1639													
BsgI	3	984	1184	2157				KasI	4	455	476	590	1772										
BsiEI	6	188	1918	2913	3337	4089		KpnI	1	277													
		4238						MfeI	1	232													
BsiHKAI	8	229	633	1117	1991	2815		MluI	1	1133													
		3315	3939	4024				MslI	9	1185	1473	1503	1984	2179									
BsmAI	7	830	1235	1361	1748	2638				2570	3836	4195	4354										
		3764	4541					NaeI	2	445	5122												
BsmBI	2	1748	2638					NarI	4	456	477	591	1773										

Enzymes that do not cut pET-45b(+)				
AarI	AatII	AflIII	AleI	AsiSI
BbvCI	BfrBI	BglIII	BmgBI	BmtI
BpII	BseRI	BsiWI	BsmI	Bsu36I
BtrI	EcoRI	EcoRV	FalI	FseI
FspAI	MscI	NdeI	NheI	NruI
NsiI	PmeI	PsrI	RsrII	SacII
SanDI	SexAI	SfiI	SmaI	SnaBI
SpeI	SrfI	StuI	Swal	XmaI
ZraI				

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