

pET-29a-c(+) Vectors

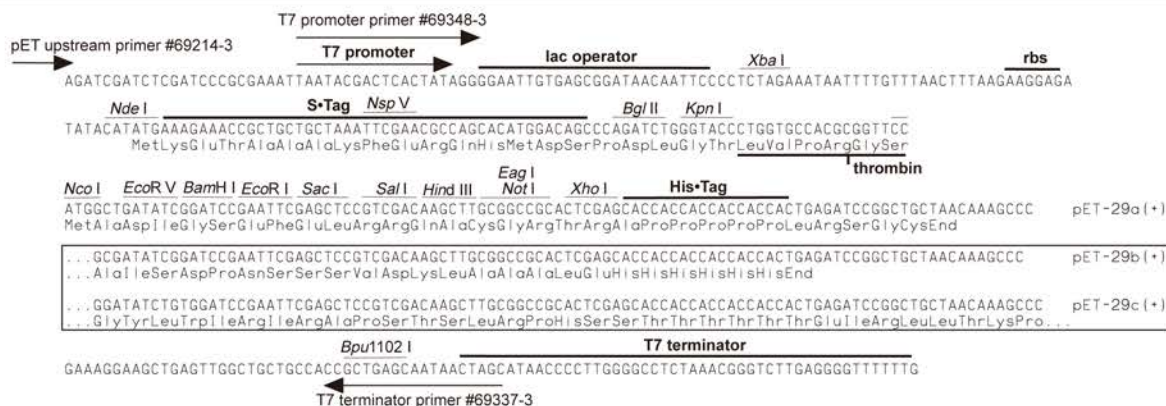
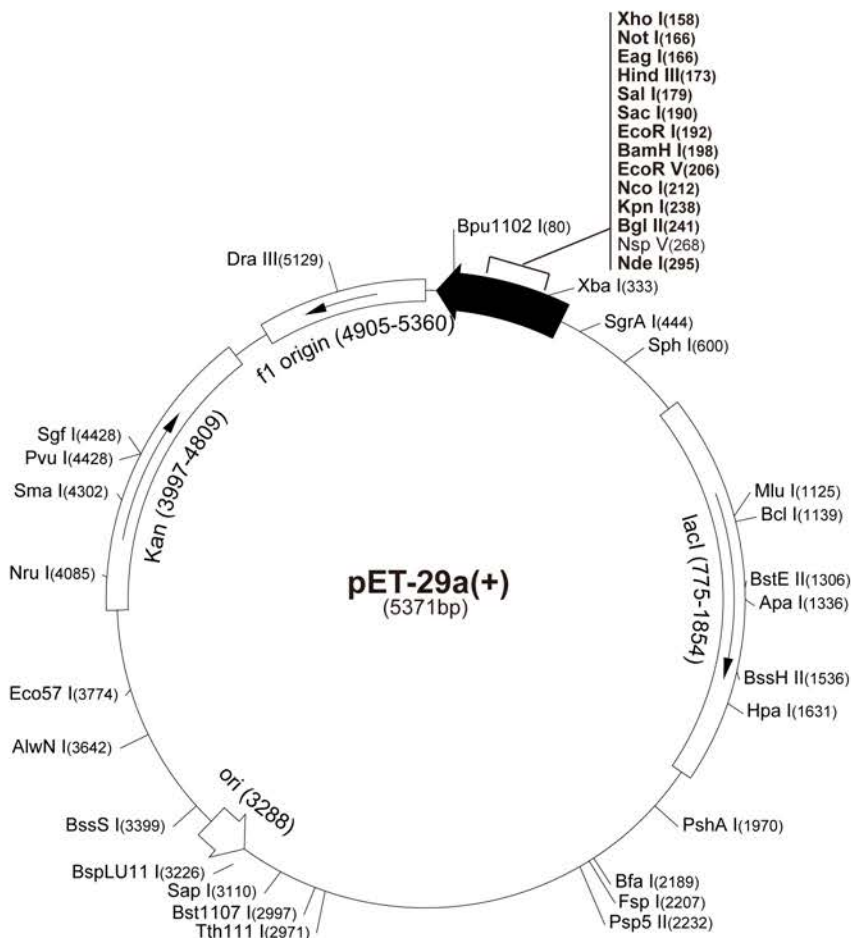
	Cat. No.
pET-29a DNA	69871-3
pET-29b DNA	69872-3
pET-29c DNA	69873-3

The pET-29a-c(+) vectors carry an N-terminal S•Tag™/thrombin configuration plus an optional C-terminal His•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 circular map. The cloning/expression region of the coding strand transcribed by T7 RNA polymerase is shown below. 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).

pET-29a(+) sequence landmarks

T7 promoter	368-384
T7 transcription start	367
S•Tag coding sequence	249-293
Multiple cloning sites	
(Nco I - Xho I)	158-217
His•Tag coding sequence	140-157
T7 terminator	26-72
lacI coding sequence	775-1854
pBR322 origin	3288
Kan coding sequence	3997-4809
f1 origin	4905-5360

The maps for pET-29b(+) and pET-29c(+) are the same as pET-29a(+) (shown) with the following exceptions: pET-29b(+) is a 5370bp plasmid; subtract 1bp from each site beyond *Bam*H I at 198. pET-29c(+) is a 5372bp plasmid; add 1bp to each site beyond *Bam*H I at 198.



pET-29a-c(+) cloning/expression region

pET-29a(+) Restriction Sites

Enzyme	# Sites	Locations					Enzyme	# Sites	Locations					Enzyme	# Sites	Locations				
AccI	2	180	2996				BstXI	3	927	1056	1179		Pil1108I	1	2012					
AccII	7	892	1620	1951	2735	2876	BstYI	9	132	198	241	689	1901	PilMI	3	260	707	4691		
		3178	4969						2418	3867	3878	4677		PleI	9	382	674	761	1557	
Acil	75						Cac8I	40							3605	4660	5064	5072	3120	
AflIII	2	1125	3226				CjeI	24						PshAI	1	1970				
AluI	22						CjePI	18						Psp5II	1	2232				
AlwI	13						Clal	2	402	4119				Psp1406I	4	787	2155	2551	4914	
Alw21I	7	159	190	625	1109	2220	CviJI	84						PvuI	1	4428				
		3044	3544				CviRI	22						PvuII	3	1725	1818	2817		
Alw44I	3	1105	3040	3540			Ddel	11						RcaI	3	523	3946	4821		
AlwNI	1	3642					Dpnl	23						RsaI	4	236	1272	3032	4263	
Apal	1	1336					DrallI	1	5129					SacI	1	190				
ApaBI	1	809					DrdI	3	2919	3334	5084			Sall	1	179				
ApoI	7	192	270	1400	4041	4225	DrdII	2	848	5134				SapI	1	3110				
		4931	4942				Dsal	3	212	562	2198			Sau96I	14					
Aval	2	158	4300				EaeI	4	166	433	565	1799		Sau3AI	23					
Avall	5	1677	2053	2141	2232	2511	EagI	1	166					ScrFI	22					
BaeI	1	233					EarI	3	743	3110	4241			SfaNI	23					
BamHI	1	198					Ecil	3	902	3300	3446			Sfcl	4	367	3491	3682	5348	
BanI	10	226	234	447	468	582	Eco47III	3	530	2031	2480			Sgfl	1	4428				
		1045	1764	1894	2020	5166	Eco57I	1	3774					SgrAI	1	444				
BanII	6	190	509	523	1336	4083	EcoNI	2	660	4340				SmaI	1	4302				
		5204					EcoO109I	3	53	558	2232			SphI	1	600				
BbsI	4	1271	1610	1984	2344		EcoRI	1	192					Sspl	2	4353	4921			
BbvI	25						EcoRII	10	229	848	1163	1703	1760	StyI	2	57	212			
BccI	13								3252	3373	3386	4316	4673	TaqI	17					
Bce83I	6	21	1939	2109	3317	3615	EcoRV	1	206					TaqII	6	1033	1251	1924	3128	
		3856					FauI	17							5033				4682	
BceII	6	644	985	1612	3728	4747	FokI	9	1171	1180	2445	2507	2585	TfiI	9	1804	2106	2276	2780	
		5155							2771	2912	4066	4672			4339	4395	4567	4658	3201	
Bcgl	8	160	194	1417	1451	1951	Fspl	1	2207					ThaI	36					
		1985	2803	2837			GdIII	4	166	433	565	1799		TseI	25					
BclI	1	1139					HaeI	6	853	2174	3241	3252	3704	Tsp45I	7	1306	2134	2665	2878	
Bfal	1	2189							4515						4575	5302	2878	2973		
BglII	1	241					HaeII	14						Tsp509I	21					
BmgI	1	1334					HaeIII	23						Tth111I	1	2971				
BpmI	4	963	1452	2086	2753		Hgal	11						Tth111II	8	964	1657	2687	3816	
Bpu10I	2	2332	4445				HgiEII	2	723	3812					3855	4264	4391	3823		
Bpu1102I	1	80					HhaI	46						UbaII	18					
BsaAI	2	2978	5129				Hin4I	4	203	1024	4114	4656		VspI	5	382	1810	1869	4627	
BsaBI	3	398	408	2423			HincII	2	181	1631				XbaI	1	333			4816	
BsaHI	5	448	469	583	1082	1765	HindIII	1	173					XcmI	3	981	1497	1515		
BsaJI	11						Hinfl	18						XhoI	1	158				
BsaWI	7	2	1444	1947	2415	3432	Hpal	1	1631					XmnI	2	2784	4817			
		3579	4563				HphI	16						Enzymes that do not cut pET-29a(+):						
BsaXI	2	1784	5077				KpnI	1	238					AatII	AflII	AgeI	AscI	AvrII		
Bsbl	2	2942	5036				MaeI	14						BsaI	BseRI	BspMI	BsrGI	Bsu36I		
BscGI	11						MaeIII	16						DraI	Eam1105I	FseI	MscI	MunI		
BsgI	3	976	1176	2386			MbolI	12						NheI	PacI	PmeI	PmlI	PstI		
Bsil	1	3399					MluI	1	1125					RleAI	RsrII	SacII	Scal	SexAI		
BsiEI	5	169	1910	3142	3566	4428	MmeI	7	3441	3625	4070	4264	4626	Sfil	SnaBI	SpeI	SrfI	Sse8387I		
BsII	26								4635	5106				StuI	SunI	Swal				
BsmI	2	4312	4389				MnII	25												
BsmAI	6	822	1227	1353	1740	2867	MseI	25												
		4444					MslI	6	1177	1465	1495	2213	2408							
BsmBI	3	1740	2867	4444					2799											
BsmFI	4	586	2127	2497	5344		MspI	29												
BsoFI	43						MspAII	9	84	283	1155	1725	1818							
Bsp24I	10	415	447	966	998	1268			2817	2936	3568	3813								
		1300	3719	3751	3897	3929	MwoI	39												
Bsp1286I	12						NarI	4	448	469	583	1765								
BspEI	2	2	2415				NciI	12												
BspGI	1	2752					NcoI	1	212											
BspLU11I	1	3226					NdeI	1	295											
Bsrl	21						NgoAIV	4	435	2023	2183	5230								
BsrBI	4	354	3159	4827	5273		NlaIII	26												
BsrDI	2	1172	1538				NlaIV	24												
BsrFI	7	435	444	811	2023	2183	NotI	1	166											
		4382	5230				NruI	1	4085											
BssHII	1	1536					Nsil	2	4278	4544										
Bst1107I	1	2997					NspI	4	600	2571	2863	3230								
BstEII	1	1306					NspV	1	268											