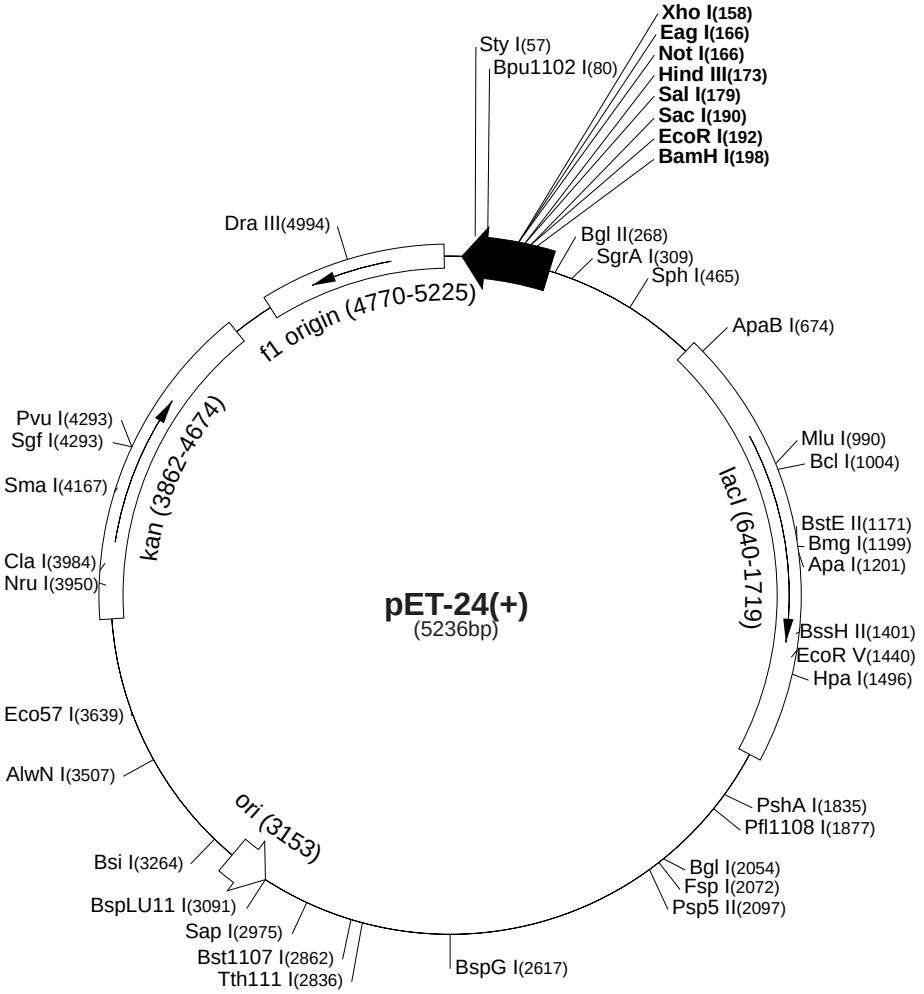
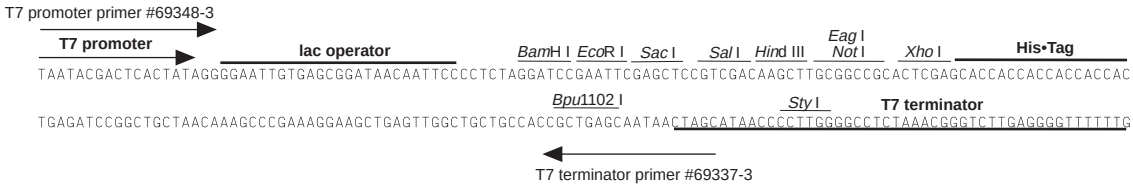
pET-24(+) Vector

pET-24(+) (Cat. No. 69772-3) is a transcription vector designed for expression from bacterial translation signals carried within a cloned insert. It therefore lacks the ribosome binding site and ATG start codon present on the pET translation vectors. A C-terminal His•Tag® sequence is available. 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-24(+) sequence landmarks

T7 promoter	237-253
T7 transcription start	236
Multiple cloning sites	
(*Bam*H I - *Xho* I)	158-203
His•Tag coding sequence	140-157
T7 terminator	26-72
lacI coding sequence	640-1719
pBR322 origin	3153
Kan coding sequence	3862-4674
f1 origin	4770-5225





pET-24(+) cloning/expression region

pET-24(+) Restriction Sites

Enzyme	# Sites	Locations				
AccI	2	180	2861			
AceIII	7	757	1485	1816	2600	2741
		3043	4834			
AciI	73					
AflIII	2	990	3091			
AluI	22					
AlwI	13					
Alw21I	7	159	190	490	974	2085
		2909	3409			
Alw44I	3	970	2905	3405		
AlwNI	1	3507				
ApaI	1	1201				
ApaBI	1	674				
ApoI	6	192	1265	3906	4090	4796
		4807				
AvaI	2	158	4165			
AvaII	5	1542	1918	2006	2097	2376
BamHI	1	198				
BanI	8	312	333	447	910	1629
		1759	1885	5031		
BanII	6	190	374	388	1201	3948
		5069				
BbsI	4	1136	1475	1849	2209	
BbvI	23					
BccI	13					
Bce83I	6	21	1804	1974	3182	3480
		3721				
BcefI	6	509	850	1477	3593	4612
		5020				
BcgI	8	160	194	1282	1316	1816
		1850	2668	2702		
BclI	1	1004				
BfaI	6	70	203	2105	3586	3893
		5145				
BglI	1	2054				
BglII	1	268				
BmgI	1	1199				
BpmI	4	828	1317	1951	2618	
Bpu10I	2	2197	4310			
Bpu1102I	1	80				
BsaAI	2	2843	4994			
BsaBI	3	267	273	2288		
BsaHI	5	313	334	448	947	1630
BsaJI	9	57	427	433	1625	2063
		3251	4164	4165	4566	
BsaWI	7	2	1309	1812	2280	3297
		3444	4428			
BsaXI	2	1649	4942			
BsbI	2	2807	4901			
BscGI	11					
BsgI	3	841	1041	2251		
BsiI	1	3264				
BsiEI	5	169	1775	3007	3431	4293
BsII	23					
BsmI	2	4177	4254			
BsmAI	6	687	1092	1218	1605	2732
		4309				
BsmBI	3	1605	2732	4309		
BsmFI	4	451	1992	2362	5209	
BsoFI	41					
Bsp24I	10	280	312	831	863	1133
		1165	3584	3616	3762	3794
Bsp1286I	12					
BspEI	2	2	2280			
BspGI	1	2617				
BspLU11I	1	3091				
BsrI	21					
BsrBI	4	223	3024	4692	5138	
BsrDI	2	1037	1403			
BsrFI	7	300	309	676	1888	2048
		4247	5095			
BssHII	1	1401				

Enzyme	# Sites	Locations				
Bst1107I	1	2862				
BstEII	1	1171				
BstXI	3	792	921	1044		
BstYI	9	132	198	268	554	1766
		2283	3732	3743	4542	
Cac8I	39					
CjeI	24					
CjePI	18					
ClaI	1	3984				
CviJI	82					
CviRI	22					
DdeI	11					
DpnI	21					
DraIII	1	4994				
DrdI	3	2784	3199	4949		
DrdII	2	713	4999			
DsaI	2	427	2063			
EaeI	4	166	298	430	1664	
EagI	1	166				
EarI	3	608	2975	4106		
EciI	3	767	3165	3311		
Eco47III	3	395	1896	2345		
Eco57I	1	3639				
EcoNI	2	525	4205			
EcoO109I	3	53	423	2097		
EcoRI	1	192				
EcoRII	9	713	1028	1568	1625	3117
		3238	3251	4181	4538	
EcoRV	1	1440				
FauI	17					
FokI	9	1036	1045	2310	2372	2450
		2636	2777	3931	4537	
FspI	1	2072				
GdiII	4	166	298	430	1664	
HaeI	6	718	2039	3106	3117	3569
		4380				
HaeII	14					
HaeIII	23					
HgaI	11					
HgiEII	2	588	3677			
HhaI	46					
Hin4I	3	889	3979	4521		
HincII	2	181	1496			
HindIII	1	173				
HinfI	18					
HpaI	1	1496				
HphI	16					
MaeII	14					
MaeIII	16					
MboII	12					
MluI	1	990				
MmeI	7	3306	3490	3935	4129	4491
		4500	4971			
MnlI	25					
MseI	23					
MslI	6	1042	1330	1360	2078	2273
		2664				
MspI	29					
MspA1I	8	84	1020	1590	1683	2682
		2801	3433	3678		
MwoI	39					
NarI	4	313	334	448	1630	
NciI	12					
NgoAIV	4	300	1888	2048	5095	
NlaIII	24					
NlaIV	21					
NotI	1	166				
NruI	1	3950				
NsiI	2	4143	4409			
NspI	4	465	2436	2728	3095	
Pfl1108I	1	1877				
PflMI	2	572	4556			

Enzyme	# Sites	Locations				
PleI	9	251	539	626	1422	2985
		3470	4525	4929	4937	
PshAI	1	1835				
Psp5II	1	2097				
Psp1406I	4	652	2020	2416	4779	
PvuI	1	4293				
PvuII	3	1590	1683	2682		
RcaI	3	388	3811	4686		
RsaI	3	1137	2897	4128		
SacI	1	190				
SalI	1	179				
SapI	1	2975				
Sau96I	14					
Sau3AI	21					
ScrFI	21					
SfaNI	23					
SfcI	4	236	3356	3547	5213	
SgfI	1	4293				
SgrAI	1	309				
SmaI	1	4167				
SphI	1	465				
SspI	2	4218	4786			
StyI	1	57				
TaqI	15					
TaqII	6	898	1116	1789	2993	4547
		4898				
TfiI	9	1669	1971	2141	2645	3066
		4204	4260	4432	4523	
ThaI	35					
TseI	23					
Tsp45I	7	1171	1999	2530	2743	2838
		4440	5167			
Tsp509I	19					
Tth111I	1	2836				
Tth111II	8	829	1522	2552	3681	3688
		3720	4129	4256		
UbaJI	18					
VspI	5	251	1675	1734	4492	4681
XcmI	3	846	1362	1380		
XhoI	1	158				
XmnI	2	2649	4682			

Enzymes that do not cut pET-24(+):

AatII	AflII	AgeI	AscI	AvrII
BaeI	BsaI	BseRI	BspMI	BsrGI
Bsu36I	DraI	Eam1105I	FseI	KpnI
MscI	MunI	NcoI	NdeI	NheI
NspV	PacI	PmeI	PmlI	PstI
RleAI	RsrII	SacII	ScaI	SexAI
SfiI	SnaBI	SpeI	SrfI	Sse8387I
StuI	SunI	SwaI	XbaI	