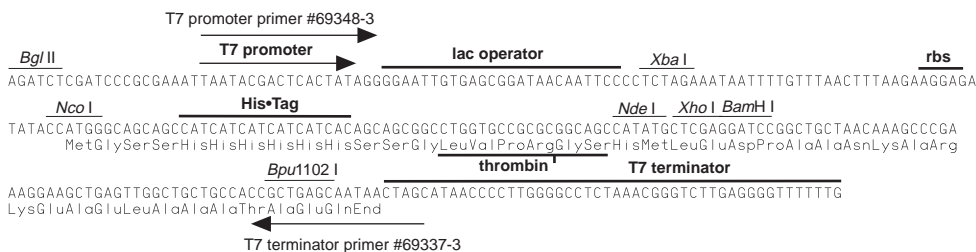
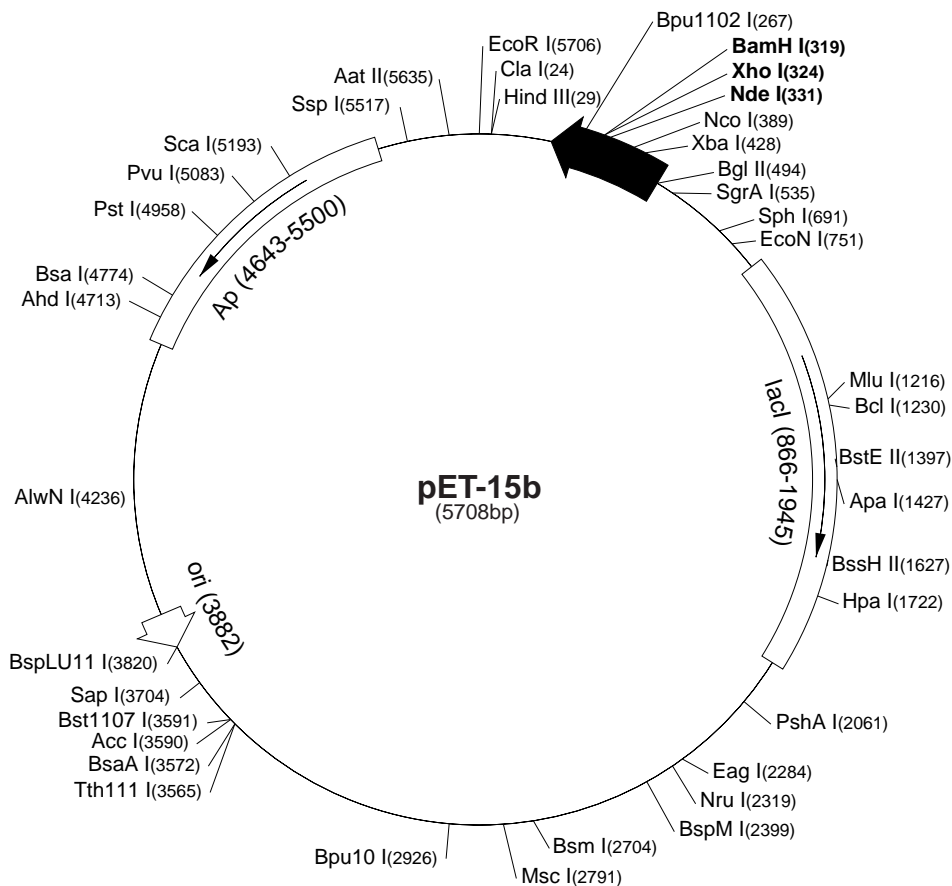


pET-15b Vector

The pET-15b vector (Cat. No. 69661-3) carries an N-terminal His•Tag[®] sequence followed by a thrombin site and three cloning sites. 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.

pET-15b sequence landmarks

| | |
|--|-----------|
| T7 promoter | 463-479 |
| T7 transcription start | 452 |
| His•Tag coding sequence | 362-380 |
| Multiple cloning sites (<i>Nde</i> I - <i>Bam</i> H I) | 319-335 |
| T7 terminator | 213-259 |
| lacI coding sequence (866-1945) | 213-259 |
| pBR322 origin | 3882 |
| <i>bla</i> coding sequence | 4643-5500 |



pET-15b cloning/expression region

pET-15b Restriction Sites

| Enzyme | # Sites | Locations | Enzyme | # Sites | Locations | Enzyme | # Sites | Locations |
|----------|---------|---|----------|---------|--|----------|---------|--|
| AatII | 1 | 5635 | BssHII | 1 | 1627 | PleI | 7 | 477 765 852 1648 3714 |
| AccI | 1 | 3590 | Bst1107I | 1 | 3591 | | | 4199 4702 |
| AccIII | 7 | 983 1711 2042 3329 3470 3772 5012 | BstEII | 1 | 1397 | PshAI | 1 | 2061 |
| AcII | 91 | | BstXI | 3 | 1018 1147 1270 | Psp5II | 2 | 2784 2826 |
| AflIII | 2 | 1216 3820 | BstYI | 11 | | Psp1406I | 5 | 878 2246 3145 4939 5312 |
| AluI | 24 | | Cac8I | 41 | | PstI | 1 | 4958 |
| AlwI | 16 | | CjeI | 25 | | PvuI | 1 | 5083 |
| Alw21I | 8 | 716 1200 2523 2814 3638 4138 5299 5384 | CjePI | 26 | | PvuII | 3 | 1816 1909 3411 |
| | | | Clal | 1 | 24 | RcaI | 4 | 614 4540 5548 5653 |
| Alw44I | 4 | 1196 3634 4134 5380 | CviJI | 97 | | RsaI | 4 | 165 1363 3626 5193 |
| AlwNI | 1 | 4236 | CviRI | 26 | | SapI | 1 | 3704 |
| ApaI | 1 | 1427 | Ddel | 11 | | Sau96I | 21 | |
| ApaBI | 2 | 900 2397 | Dpnl | 29 | | Sau3AI | 29 | |
| ApoI | 2 | 1491 5706 | DraI | 3 | 4579 4598 5290 | Scal | 1 | 5193 |
| AvaI | 2 | 324 2770 | DrdI | 2 | 3513 3928 | ScrFI | 25 | |
| Avall | 9 | 1768 2144 2232 2481 2784 2826 3105 4851 5073 | DrdII | 1 | 939 | SfaNI | 24 | |
| | | | Dsal | 3 | 389 653 2792 | Sfcl | 5 | 138 462 4085 4276 4954 |
| BamHI | 1 | 319 | EaeI | 6 | 524 656 1890 2284 2789 5101 | SgrAI | 1 | 535 |
| BanI | 13 | | EagI | 1 | 2284 | SphI | 1 | 691 |
| BanII | 3 | 600 614 1427 | Eam1105I | 1 | 4713 | SspI | 1 | 5517 |
| BbsI | 5 | 1362 1701 2075 2938 5691 | EarI | 3 | 834 3704 5508 | StyI | 3 | 244 389 2714 |
| BbvI | 31 | | Ecil | 5 | 993 2740 3894 4040 4868 | TaqI | 13 | |
| BccI | 16 | | Eco47III | 3 | 621 2122 3074 | TaqII | 8 | 1124 1342 2015 3722 5061 |
| Bce83I | 7 | 208 2030 2200 3911 4209 4450 5318 | Eco57I | 2 | 4368 5380 | 5246 | 5399 | 5416 |
| Bcefl | 5 | 735 1076 1703 2512 4322 | EcoNI | 1 | 751 | TfiI | 7 | 1895 2197 2351 2649 2870 3374 3795 |
| Bcgl | 8 | 1508 1542 2042 2076 3397 | EcoO109I | 5 | 240 649 2784 2826 5689 | Thal | 41 | |
| 3431 | 5218 | 5252 | EcoRI | 1 | 5706 | Tsel | 31 | |
| BclI | 1 | 1230 | EcoRII | 11 | | Tsp45I | 9 | 124 1397 2225 2492 3259 3472 3567 4969 5180 |
| Bfal | 6 | 257 429 2834 4315 4568 4903 | EcoRV | 2 | 187 1666 | | | |
| | | | FauI | 18 | | Tsp509I | 16 | |
| BglI | 3 | 2280 2514 4833 | FokI | 14 | | Tth111I | 1 | 3565 |
| BglII | 1 | 494 | FspI | 3 | 2703 2801 4935 | Tth111II | 7 | 1055 1748 3281 4410 4417 4449 5705 |
| BmgI | 1 | 1425 | GdIII | 5 | 524 656 1890 2284 5101 | | | |
| BpmI | 6 | 1054 1543 2177 2731 3347 4783 | HaeI | 8 | 944 2265 2337 2394 2791 3835 3846 4298 | UbaII | 26 | |
| | | | HaeII | 13 | | VspI | 4 | 477 1901 1960 4885 |
| Bpu10I | 1 | 2926 | HaeIII | 28 | | XbaI | 1 | 428 |
| Bpu1102I | 1 | 267 | HgaI | 15 | | XcmI | 3 | 1072 1588 1606 |
| BsaI | 1 | 4774 | HgiEII | 2 | 814 4406 | XhoI | 1 | 324 |
| BsaAI | 1 | 3572 | HhaI | 45 | | XmnI | 2 | 3378 5312 |
| BsaBI | 3 | 493 499 3017 | Hin4I | 5 | 16 1115 2486 4712 4786 | | | |
| BsaHI | 8 | 539 560 674 1173 1856 2551 5250 5632 | HincII | 2 | 1722 5254 | | | |
| | | | HindIII | 1 | 29 | | | |
| BsaJI | 11 | | Hinfl | 14 | | | | |
| BsaWI | 7 | 189 1535 2038 3009 4026 4173 5004 | HpaI | 1 | 1722 | | | |
| | | | HphI | 17 | | | | |
| BsaXI | 1 | 1875 | Maell | 12 | | | | |
| Bsbl | 2 | 3536 5256 | MaellI | 18 | | | | |
| BscGI | 13 | | MbolI | 15 | | | | |
| BsgI | 3 | 1067 1267 2980 | MluI | 1 | 1216 | | | |
| Bsil | 3 | 3993 5377 5684 | MmeI | 2 | 4035 4219 | | | |
| BsiEI | 6 | 2001 2287 3736 4160 5083 5232 | MnlI | 34 | | | | |
| | | | MscI | 1 | 2791 | | | |
| BsII | 22 | | MseI | 24 | | | | |
| BsmI | 1 | 2704 | MslI | 10 | 1268 1556 1586 2376 2807 3002 3393 4965 5124 5483 | | | |
| BsmAI | 7 | 913 1318 1444 1831 3461 4774 5550 | MspI | 35 | | | | |
| | | | MspAI | 11 | | | | |
| BsmBI | 2 | 1831 3461 | Mwol | 44 | | | | |
| BsmFI | 4 | 677 2218 2443 3091 | NarI | 5 | 539 560 674 1856 2551 | | | |
| BsoFI | 57 | | NciI | 14 | | | | |
| Bsp24I | 12 | | NcoI | 1 | 389 | | | |
| Bsp1286I | 11 | | NdeI | 1 | 331 | | | |
| BspEI | 2 | 189 3009 | NgoAIV | 4 | 526 2114 2274 2628 | | | |
| BspGI | 3 | 2404 2481 3346 | NlaIII | 31 | | | | |
| BspLU11I | 1 | 3820 | NlaIV | 29 | | | | |
| BspMI | 1 | 2399 | NruI | 1 | 2319 | | | |
| BsrI | 25 | | NspI | 4 | 691 3165 3457 3824 | | | |
| BsrBI | 3 | 449 3753 5554 | Pfi1108I | 2 | 2103 4731 | | | |
| BsrDI | 4 | 1263 1629 4774 4948 | PfiMI | 3 | 798 2666 2715 | | | |
| BsrFI | 8 | 160 526 535 902 2114 2274 2628 4793 | | | | | | |

Enzymes that do not cut pET-15b:

| | | | | |
|--------|----------|--------|--------|-------|
| AflIII | AgeI | AscI | AvrII | BaeI |
| BseRI | BsrGI | Bsu36I | DraIII | FseI |
| KpnI | MunI | NheI | NotI | NsiI |
| NspV | Pacl | PmeI | PmlI | RleAI |
| RsrII | Sacl | SacII | Sall | SexAI |
| SfiI | Sgfl | SmaI | SnaBI | SpeI |
| SrfI | Sse8387I | StuI | SunI | Swal |