

## pBluescript<sup>®</sup> SK (+/-) phagemid

The pBluescript SK (+/-) phagemid is a 2958-bp phagemid derived from pUC19. The SK designation indicates the polyliner is oriented such that *lac Z* transcription proceeds from *Sac I* to *Kpn I*.

**f1 (+) origin:** (6-462) f1 filamentous phage origin of replication allowing recovery of the sense strand of the *lac Z* gene when a host strain containing the pBluescript phagemid is co-infected with helper phage.

**f1 (-) origin:** (6-462) f1 filamentous phage origin of replication allowing recovery of the antisense strand of the *lac Z* gene when a host strain containing the pBluescript phagemid is co-infected with helper phage.

**ColE1 origin:** (1032-1912 bp) Plasmid origin of replication used in the absence of helper phage.

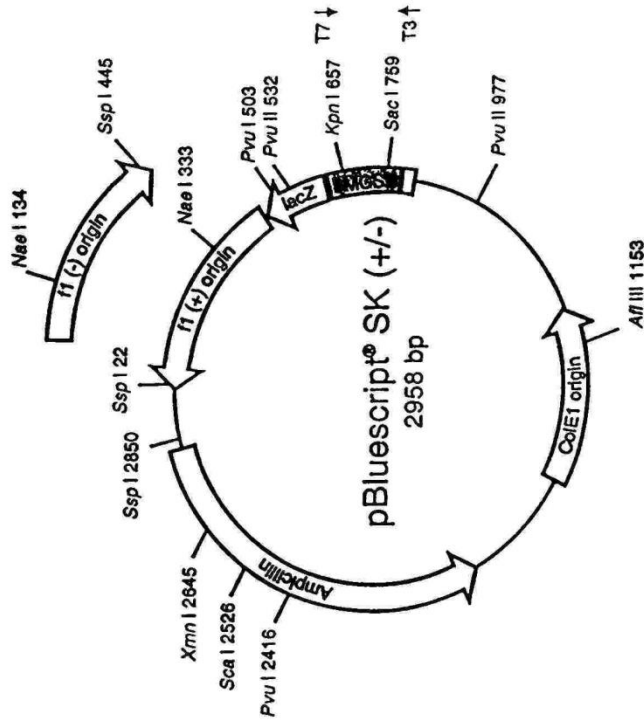
***lac Z* gene:** (*lac* promoter: 816-938 bp) This portion of the *lac Z* gene provides  $\alpha$ -complementation for blue/white color selection of recombinant phagemids. An inducible *lac* promoter upstream from the *lac Z* gene permits fusion protein expression with  $\beta$ -galactosidase gene product.

**MCS:** (657-759 bp) Multiple cloning site flanked by T3 and T7 RNA promoters (polylinker sequence is shown below).

**Ampicillin:** (1975-2832 bp) Ampicillin-resistance gene (*Amp<sup>r</sup>*) for antibiotic selection of the phagemid vector.

**Note:** The upper strand is designated the (+) strand and the lower strand is the designated the (-) strand.

GenBank #52325 [SK (+)] & #52324 [SK (-)]



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MET                                     T3 promoter +1 →
5' GGAAACAGCTATGACCATGATTACGCCAAGCTCGAAATTACCCCTCACTAAAGGGAAACAAGAGCTGGAGCTCCACCAGGGTGGGGCCCGCTCTAGAACTAGTGGATCCCCGGGGCTGCAGG
3' CCTTTGCGATACTGGGTACTAATCGGGTTCGAGCTTAAATGGGAGTGAATTCCTTTGTTTCGACCTCGAGGTGGCCACCAGGGGGGATCTTGTACCTAGGGGGCCCGCAGCGCTTAA
      |
      | 816
      | β-Galactosidase →
      |
      | 759
      |
      | BspI 06 I   Hinc II   Eco0109 I
      | Cla I     Acc I     Dra II
      | EcoR V   Hinc III   Sal I     Xho I     Kpn I
      | AATTCGATATCAAGCTTATCGATACCGCTCGACCTCGAGGGGGGGCCGGTACCCCAATTCGCCCTATAGTGCCTATTACATTCAGCCGCTGCTTTTACAA 3' (+)
      | GCTATAGTTCGAAATAGCTATGGGAGCTTGGGAGCTCCCGGGGGCATGGGTTAAGGGGGATATCCTCAGCAATAATGTTAAGTGACCCGACGCAAAAATGTT 5' (-)
  
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