

pKK223-3 Expression Vector

- For over-expression of proteins under the control of the strong *tac* promoter.

pKK223-3 (1) contains the strong *tac* promoter upstream from the multiple cloning site and the strong *rmb* ribosomal terminator downstream for control of protein expression (2-4).

Induction: *tac* promoter is inducible with 1-5 mM IPTG. Promoter is very strong; even uninduced cells may show a low level of expression.

Expression: Genes containing a ribosome-binding site and ATG can be inserted into any unique site in the MCS for expression. The ribosome-binding site on the plasmid can be utilised to express inserts if the ATG start codon of the insert is within 5-13 bp from the provided ribosome-binding site (5, 6).

Transcription terminators: *rmb* transcription terminators stabilize the plasmid by inhibiting read-through transcription initiated from the *tac* promoter in the parent plasmid.

Host(s): *lac*I^q strains; *E. coli* JM105 is recommended.

Selectable marker(s): Plasmid confers resistance to 100 µg/ml ampicillin.

Amplification: Recommended.

Control Regions: Expression control region: *tac* promoter: -10: 50-44; -35: 72-67; Ribosome binding site: 11. MCS: 4552-4587. *rmb* operon region: 5S rRNA region: 4471-4352; *rmb* T1 terminator: 4348-4305; *rmb* T2 terminator: 4173-4146. β -lactamase gene region: Promoter: -10: 4082-4077; -35: 4105-4100; Start codon (ATG): 4035; Stop codon (TAA): 3178. Plasmid replication region: Site of replication initiation: 2417-2415; Region necessary for replication: 3111-2415.

ORDERING INFORMATION

Product	Quantity	Code Number
pKK223-3 Expression Vector	25 µg	27-4935-01

References

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- Amann, E. *et al.*, *Gene* **25**, 167 (1983).
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- Jaffe, B. M. *et al.*, *Biochemistry* **27**, 1869 (1988).
- Kozak, M., *Microbiol. Rev.* **47**, 1 (1983).
- Gold, L., *Ann. Rev. Biochem.* **57**, 199 (1988).

■ / GenBank Accession Number M77749.

