

Resource Summary Report

Generated by [dkNET](#) on Aug 31, 2026

pMAL-EF-Sep

RRID:Addgene_34627

Type: Plasmid

Proper Citation

RRID:Addgene_34627

Plasmid Information

URL: <http://www.addgene.org/34627>

Proper Citation: RRID:Addgene_34627

Insert Name: EF-Sep

Organism: E. coli

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:21868676](#)

Vector Backbone Description: Backbone Marker:NEB; Backbone Size:6700; Vector Backbone:pMAL-c2x; Vector Types:Bacterial Expression; Bacterial Resistance:Ampicillin

Comments: To construct pMAL-EF-Sep the gene encoding EF-Sep, was cloned between the NdeI and BamHI sites in the pET20b plasmid (Novagen) to add a C-terminal His6 tag. This fusion construct was then PCR-amplified using primers adding MfeI and PstI restriction sites. The PCR product was cloned in-frame between EcoRI and PstI in pMALc2x (New England Biolabs) to add an N-terminal maltose binding protein (MBP) tag. To prevent possible enzymatic dephosphorylation of O-phospho-L-serine (Sep) in vivo, the gene encoding phosphoserine phosphatase (serB), which is catalyzing the last step in serine biosynthesis, was deleted from Escherichia coli strains Top10 (Top10?serB - Addgene #34928) and BL21 (BL21?serB - Addgene #34929). These strains are required hosts when using this plasmid.

Plasmid Name: pMAL-EF-Sep

Relevant Mutation: His67 to Arg , Glu216 to Asn, Asp217 to Gly, Phe219 to Tyr, Thr229 to Ser, Asn274 to Trp, and Val 351 Leu

Record Creation Time: 20220422T222147+0000

Record Last Update: 20260829T080414+0000

Ratings and Alerts

No rating or validation information has been found for pMAL-EFSep.

No alerts have been found for pMAL-EFSep.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.