

Resource Summary Report

Generated by [PRECISE-TBI](#) on Sep 3, 2026

Syn61?3(ev5)

RRID:Addgene_174514

Type: Plasmid

Proper Citation

RRID:Addgene_174514

Plasmid Information

URL: <http://www.addgene.org/174514>

Proper Citation: RRID:Addgene_174514

Insert Name: Recoded E. coli strain without TCG, TCA, or TAG codons in the open reading frames and deleted serT, serU and prfA genes

Bacterial Resistance: Streptomycin

Defining Citation: [PMID:34083482](#)

Vector Backbone Description: Vector Backbone:NA; Vector Types:; Bacterial Resistance:Streptomycin

Comments: From the Syn61 strain (Addgene #174513), two rounds of parallel mutagenesis and dynamic selection were followed by deletion of the serT, serU and prfA genes, and a further three rounds of parallel mutagenesis and dynamic selection yielded Syn61?3(ev5) (Addgene #174514). Genotyping primers for presence of synthetic insert in 100k01 in Syn61 strain: GE282 AAAAAGGTCTGGGCCGACGGTC GE283 GCAATAATGGCAGCCACACCTTG Genotyping for deletion of serU gene: GE1147 TACGAATGATGCCTCGCCGCAAATAAG GE1148 CCTCACGCAACGGAATAAAGGGAAGCTC Genotyping for deletion of serT gene: GE1215 AGCGTCAGGCTCAGCAGAAATAGG GE1216 ACGTCCCTGTAGCAAGGCAAACCATC Genotyping for deletion of prfA gene: v13-1011 GACTAACCGCTTGATCCATGCGC v13-1012 CAAGTTGCTGACATTGTTCGTCAGTCAGC

Plasmid Name: Syn61?3(ev5)

Record Creation Time: 20220422T222009+0000

Record Last Update: 20260902T042926+0000

Ratings and Alerts

No rating or validation information has been found for Syn61?3(ev5).

No alerts have been found for Syn61?3(ev5).

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 2 mentions in open access literature.

Listed below are recent publications. The full list is available at [PRECISE-TBI](#) .

Voorhees PJ, et al. (2025) Defining serine tRNA knockout as a strategy for effective repression of gene expression in organisms with a recoded genome. Nucleic acids research, 53(1).

Nyerges A, et al. (2023) A swapped genetic code prevents viral infections and gene transfer. Nature, 615(7953), 720.