Resource Summary Report

Generated by kravitz2 on Aug 10, 2026

pET21b(+)_SARS-CoV-2_3CLpro-C145A-Q306A

RRID:Addgene_177335
Type: Plasmid

Proper Citation

RRID:Addgene_177335

Plasmid Information

URL: http://www.addgene.org/177335

Proper Citation: RRID:Addgene_177335

Insert Name: SARS-CoV-2 3C-like (C145A) proteinase (ORF1ab Severe acute respiratory syndrome coronavirus 2)

Organism: SARS-CoV-2 virus

Bacterial Resistance: Ampicillin

Defining Citation: PMID:34672947

Vector Backbone Description: Backbone Marker:Novagen; Backbone Size:5400; Vector Backbone:pET21b(+); Vector Types:Bacterial Expression; Bacterial Resistance:Ampicillin

Comments: Silent mutation in the original sequence to delete a second NdeI site as NdeI was needed for cloning; codon coding for Q306 was mutated to codon coding for A306 to delete natural cleavage site of the 3CL-protease; codon coding for active site residue C145 was mutated to A145 for inactive protease production; Factor Xa cleavage site can cleave off all 3 downstream tags; three tandem FLAG epitope tags is followed by an enterokinase cleavage site.

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Relevant Mutation: silent mutation C to T at position 10546 (eliminating NdeI site); codon TGT for C145 to codon GCG for A145 (eliminating active site amino acid Cysteine); codon CAA for Q306 to codon GCA for A306 (eliminating natural 3CL autocleavage site)

Record Creation Time: 20220422T222023+0000

Record Last Update: 20260808T081312+0000

Ratings and Alerts

No rating or validation information has been found for pET21b(+)_SARS-CoV-2_3CLpro-C145A-Q306A.

No alerts have been found for pET21b(+)_SARS-CoV-2_3CLpro-C145A-Q306A.

Data and Source Information

Source: Addgene

Usage and Citation Metrics

We found 1 mentions in open access literature.

Listed below are recent publications. The full list is available at kravitz2 .

Grin PM, et al. (2024) SARS-CoV-2 3CLpro (main protease) regulates caspase activation of gasdermin-D/E pores leading to secretion and extracellular activity of 3CLpro. Cell reports, 43(12), 115080.