Resource Summary Report

Generated by RRID on Aug 19, 2026

pRK1043

RRID:Addgene_8835
Type: Plasmid

Proper Citation

RRID:Addgene_8835

Plasmid Information

URL: http://www.addgene.org/8835

Proper Citation: RRID:Addgene_8835

Insert Name: tobacco etch virus protease, catalytic domain

Organism: tobacco etch virus

Bacterial Resistance: Chloramphenicol and Ampicillin

Defining Citation: PMID:11809930

Vector Backbone Description: Backbone Marker:New England Biolabs; Backbone Size:6700; Vector Backbone:pMal-C2; Vector Types:Bacterial Expression; Bacterial Resistance:Chloramphenicol and Ampicillin

Comments: pRK1043 overproduces the catalytic domain of tobaco etch virus (TEV) protease in the form of an affinity sandwich, with E. coli maltose-binding protein fused to its N-terminus and a polyarginine tag fused to its C-terminus. TheTEV protease produced by this strain is the autoinactivation-resistant mutant S219V.The pRIL plasmid (Stratagene) improves the yield of TEV protease by increasing the supply of argU tRNA in the cell (for AGG and AGA codons). The catalytic activity of the S219V mutant is approximately 2-fold greater than that of the wild-type protease. Shifting the temperature from 37°C to 30°C during induction maximizes the yield of soluble MBP-TEV-Arg fusion protein. Bacterial strain: E.coli BL21(DE3)-RIL (Stratagene).

Plasmid Name: pRK1043

Relevant Mutation: Autolysis-resistant S219V mutant

Record Creation Time: 20220422T222604+0000

Record Last Update: 20260815T082150+0000

Ratings and Alerts

No rating or validation information has been found for pRK1043.

No alerts have been found for pRK1043.

Data and Source Information

Source: Addgene

Usage and Citation Metrics

We found 6 mentions in open access literature.

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

Liang Q, et al. (2025) Rational design yields RNA-binding zinc finger domains with altered sequence specificity. RNA (New York, N.Y.), 31(2), 150.

Dingal PCDP, et al. (2023) Molecular mechanisms controlling the biogenesis of the TGF-? signal Vg1. Proceedings of the National Academy of Sciences of the United States of America, 120(43), e2307203120.

Kipniss NH, et al. (2017) Engineering cell sensing and responses using a GPCR-coupled CRISPR-Cas system. Nature communications, 8(1), 2212.

Brockly F, et al. (2016) Production and Purification of Recombinant SUMOylated Proteins Using Engineered Bacteria. Methods in molecular biology (Clifton, N.J.), 1475, 55.

Mentrup T, et al. (2015) A Cell-Based Assay Reveals Nuclear Translocation of Intracellular Domains Released by SPPL Proteases. Traffic (Copenhagen, Denmark), 16(8), 871.

Jun Y, et al. (2007) Sec18p and Vam7p remodel trans-SNARE complexes to permit a lipid-anchored R-SNARE to support yeast vacuole fusion. The EMBO journal, 26(24), 4935.