Resource Summary Report

Generated by RRID on Aug 19, 2026

pHis17_ParM _2

RRID:Addgene_78202
Type: Plasmid

Proper Citation

RRID:Addgene_78202

Plasmid Information

URL: http://www.addgene.org/78202

Proper Citation: RRID:Addgene_78202

Insert Name: parM (K33A D63C T174A T175N D224C C287A)

Organism: E. coli

Bacterial Resistance: Ampicillin

Defining Citation: PMID:20158267

Vector Backbone Description: Vector Backbone:pHis17; Vector Types:Bacterial Expression; Bacterial Resistance:Ampicillin

Comments: The plasmid is used to express the plasmid segregation protein, ParM, from E. col. The protein is modified for use as the scaffold of an ADP biosensor, ATR-ParM. Two cysteine mutations are for label attachment (D63C and D224C); there is a mutation to inhibit filament formation (K33A), two mutations to weaken ATP binding (T174A and T175N), a mutation to change the exposed cysteine (C287A) and a C-terminal His6 tag to aid purification. When labelled with two iodoacetamidotetramethylrhodamine (IATR) fluorophores, this biosensor has a fluorescence intensity change of up to 20-fold and can be used to measure ADP in the range of hundreds of nanomolar to ~100 ??M, in the presence of up to millimolar ATP. The biosensor can also be used for measurement of other nucleoside diphosphates e.g. GDP, UDP and others.

Plasmid Name: pHis17_ParM _2

Relevant Mutation: K33A D63C T174A T175N D224C C287A

Record Creation Time: 20220422T222515+0000

Record Last Update: 20260815T082022+0000

Ratings and Alerts

No rating or validation information has been found for pHis17_ParM _2 .

No alerts have been found for pHis17_ParM _2 .

Data and Source Information

Source: Addgene

Usage and Citation Metrics

We found 3 mentions in open access literature.

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

Mitra N, et al. (2025) Mutational analysis of the F plasmid partitioning protein ParA reveals residues required for oligomerization and plasmid maintenance. Nucleic acids research, 53(12).

Pande V, et al. (2022) Filament organization of the bacterial actin MreB is dependent on the nucleotide state. The Journal of cell biology, 221(5).

Kanade M, et al. (2021) Dual specificity of a prokaryotic GTPase-activating protein (GAP) to two small Ras-like GTPases in Myxococcus xanthus. The FEBS journal, 288(5), 1565.