MUT-4871 rbcL-K175S mt+

Cat. No. *ALS-04006*

Lot. No. (See product label)

Subategory
Mutants

Description
Using plasmid p699, rbcL direct mutagenesis, chloroplast transformation of wild-type 2137 mt+ (cloned), selection for spectinomycin resistance in the dark, and screening for a homoplasmic acetate-requiring phenotype to create a K175G substitution (AAA-TCA) in the Rubisco large subunit were performed. The K175S substitution causes a 90% decrease in Rubisco holoenzyme and a 99% decrease in Rubisco carboxylase activity. This mutant was created to investigate the role of active-site Lys-175 in catalysis. It has been maintained with acetate medium in darkness since its creation.

Species
Chlamydomonas

Locus
rbcL

Chromosome
Chloroplast

Phenotype
Requires acetate; sensitive to light

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