MUT-4868 rbcL-K175C mt+

Cat. No. *ALS-04003*

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 K175C substitution (AAA-TGT) in the Rubisco large subunit were performed. The K175C 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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