

MUT-4944 rbcL-C256F/C369V mt+

Cat. No. ALS-04079

Lot. No. (See product label)

Subcategory

Mutants

Description

Using standard methods of directed mutagenesis and chloroplast transformation of rbcL Δ -MX3312 mt+ (MUT-4696), two substitutions (C256F and C369V) were created together in the Rubisco large subunit. Because Cys-256 and Cys-369 are methylated in Chlamydomonas Rubisco, but replaced by Phe and Val in plant Rubisco, the mutant was created to investigate the role of the modified residues in Rubisco structure or function. The C256F/C369V substitutions cause a small decrease in carboxylation catalytic efficiency, but do not affect the photosynthetic growth of the mutant cells. This strain has been maintained with acetate medium in darkness to prevent selection for secondary mutations that may improve Rubisco function.

Species

Chlamydomonas

Locus

rbcL

Chromosome

Chloroplast

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