

MUT-4837 rbcL-A222T mt+ (S96-8E suppressor of 68-4PP)

Cat. No. ALS-03972

Lot. No. (See product label)

Subcategory

Mutants

Description

Using standard methods of directed mutagenesis and chloroplast-gene transformation of rbcL Δ -25B1 mt+ (MUT-4700), an A222T substitution (GCT-ACA) was created in the Rubisco large subunit. This is the intragenic-suppressor substitution that complements the L290F substitution in photosynthesis-competent revertant R96-8E (rbcL-L290F/A222T). The A222T substitution alone improves the thermal stability of wild-type Rubisco. The x-ray crystal structure of L290F/A222T double-mutant Rubisco has been solved. 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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