MUT-5759 D6cia5/GYD

Cat. No. *ALS-04749*

Lot. No. (See product label)

Subategory

Mutants

Description

This strain was obtained from a conventional crossing using two mutants: LMJ.SG0182.017965 (deficient in the gene for glycolate dehydrogenase) and MUT-2702 cia5 (deficient in carbon concentrating mechanisms). Prior to this, both mutant strains were crossed with wild type strains to improve fitness: LMJ.SG0182.017965 x SAG 11-32b and MUT-2702 cia5 x MUT-410. The strain requires elevated CO_2 for growth on minimal medium due to its photorespiratory phenotype. It grows well on acetate medium. Since it contains a paromomycin resistance cassette, it can also be cultured on medium with antibiotic. CMD6cia5/GYD is a double mutant deficient in the genes for cia5/CCM1 and GYD1. Cia5 has previously been identified as master regulator of the carbon concentrating mechanism in Chlamydomonas. GYD1 is the glycolate dehydrogenase that converts glycolate from photorespiration into glyoxylate.

Species

Chlamydomonas

Locus

CIA5 [CCM1], GYD1

Chromosome

2,6

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