MUT-5663 ift74-2 IFT74Δ130 ift81-1 IFT81(5E) mt+

Cat. No. *ALS-04659*

Lot. No. (See product label)

Subategory
Mutants

Description
This is a double mutant made by mating ift74-2 IFT74Δ130 to ift81-1 IFT81(5E). The strain expresses both IFT74Δ130 and IFT81(5E) in a background otherwise null for IFT74 and IFT81. IFT74Δ130 is a version of IFT74 lacking aa 1-130 important for the protein's interaction with the highly acidic tail (also known as E-hook) of β-tubulin. IFT81(5E) is a version of IFT81 in which five highly conserved basic residues (K73, R75, R87, K114, and R115) in the protein's calponin-homology domain have been replaced by glutamate to reduce or eliminate the protein's binding to tubulin. The strain is predicted to lack nearly all intraflagellar transport of tubulin. It has a strong palmelloid phenotype and forms very short flagella with normal axonemal ultrastructure. It was created by insertional mutagenesis of the parent strains with a fragment conferring resistance to hygromycin B (aph7") to generate ift74-2 and ift81-1, followed by transformation with a DNA fragment encoding IFT74Δ130 or IFT81(5E), respectively, and containing a paromomycin-resistance gene as a selectable marker. The transformed strains were then crossed to generate the double mutant.Mutant alleles: ift74-2, chromosome_1:4204163-4208957; ift81-1, chromosome_17:3362408-3368081.

Species
Chlamydomonas

Locus
IFT74, IFT81

Chromosome
1,17

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