

Isolation and map location of a new acetate-requiring mutant, *ace-9*, of *Neurospora crassa*

S. Santosa and H. Kuwana - Faculty of Science, Kwansei Gakuin University, Nishinomiya, Hyogo 662, Japan.

A new acetate-requiring mutant strain of *Neurospora crassa* (*ace-9*), has been isolated from the double mutant strain *cot-1;inl a*, by inositol-less death (Lester and Gross 1959. Science 129:572) in Vogel's medium supplemented with 0.3% sodium acetate and 2% sucrose. The mutant grows well on complex medium and on Vogel's medium supplemented with casamino acids, acetate, or acetate plus ethanol. Like *ace-2*, *ace-3* and *ace-4* (Okumura and Kuwana 1979. Japan J. Genet. 54:235-244), it shows very weak activity of pyruvate dehydrogenase complex, but has normal activities of pyruvate carboxylase, pyruvate kinase and glucose-6-phosphate dehydrogenase.

The *ace-9* gene maps between *nuc-2* and *arg-13* on the right arm of the linkage group II (Table 1). Thus the gene sequence near *ace-9* is :-*pyr-4* - *thr-2* -Centromere- *arg-5* - *nuc-2* - *ace-9* - *arg-12* - *aro-1*.

Table 1. Linkage data of *ace-9* in the format of Perkins (1959, Genetics 44:1185-1208)

Zygote genotype and recombination percent			Parental combina- tion	Recombinations			Total and percent germination	Marker isolation numbers
				Singles region 1	Singles region 2	Doubles regions 1 and 2		
+ + thr-2 arg-5 10.2 12.2	+ ace-9 +	+ ace-9 +	95	38	33	1	394	35423
			212	1	14	0	53%	27947
								KG601
+ + pyr-4 + 19.8 3.2	+ ace-9 +	+ arg-12 +	51	36	1	0	253	36601
			144	14	7	0	63%	KG601
								UM107
+ + nuc-2 + 1.7 9.6	+ ace-9 +	+ aro-1 +	15	1	1	0	115	T28-M2
			87	1	10	0	76%	KG601
								Y7655