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Abstract

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Numerous additional gene loci have been established and mapped since the 1982 comoendium of Perkins *et al*. (Microbiol. Rev. 46:426-570). These are listed in current updates of the maps (Perkins 1987 Genetics Maps 4: Fungal Genetics Newsl. 34), where references are given if information has been published. The following loci have not been adequately documented elsewhere.

acr-5: acriflavine resistant-5

IIR. Between arg-5 (6%) and pe (9%).
Allele JLC74, used for mapping, is readily storable on acriflavine, 50 g/ml. This allele was spontaneous in a selective plating of ascospores from Sk-2^K a x sc leu-1 A. Isolated 1984 by J.L. Campbell. Scoring does not require presence of a morphological mutation, in contrast to allele KH161 as described by Hsu 1973 Neurospora Newsl. 20:39. Stocks have been deposited that are free of Sk-2^K.

chol-3: choline-3

VR. Between at (18%) and al-3 (19-47%)
Requires choline. Growth subnormal even on optimal supplement. Allele S2586 obtained and requirement identified in E.L. Tatum laboratory.

chol-4: choline-4

IV. Linked cot-1 (32%)
Requires choline. Growth subnormal even on optimal supplement. Allele S1089 obtained and requirement identified in E.L. Tatum laboratory.

cr-4: crisp-4

IV. Linked pdx-1 (6%), cot-1 (22%).
Early conidiation without aerial hyphae, resembling cr-1 (LePage 1975 Heredity 84:293). Allele LP558 from R.W.F. LePage via M.L. Pall.

cya-8: cytochrome a-8

VIII. Left of T(ALS179) (5%), cyt-7 (7%), adh (19%), nic-3 (39%). Leftmost marker in VII.
Deficient in cytochrome aa3; phenotype similar to [mi-3] (H. Betrand, personal communication). Very slow, sparse, transparent growth, little conidiation. Many germinants from ascospores fail to survive. Germinants are readily rescued and maintained in heterokaryons with a^m1 ad-3B cyh-1. Origin: Appears recurrently among progeny of eas: easily wettable (UCLA191). Does not require the presence of eas for expression.

hss-1: histidine sensitive-1

IVR. Linked cot-1 (19%), cys-4 (2%)
Sensitive to histidine (0.5 mg/ml) but not to UV (D.E.A. Catcheside, personal communication). Not sensitive to MMS or gamma-rays (A.L. Schroeder, personal communication). Allele MN332 isolated by D.E.A. Catcheside following filtration enrichment. Mapping by A.L. Schroeder, Ian Ross, Perkins and Pollard.

oak: oak

VR. Between un-9 (7%) and his-6 (6%). Recombines with smco-6.
Growth is initially semicolonial. Hyphae form adherent aggregates, atop which conidia form in dense balls. Under some conditions, a trunk of hyphae may produce branches with massed conidia that are held free above the agar. Allele R2358 from S.R. Gross.

pen-1: perithecial neck-1

VII. Linked csp-2 (4%)

Perithecia are barren when pen-1 is used as female, even if the fertilizing parent is pen^+. An ostiole is present, but no beak. No ascospores are extruded. A few croziers and asci are present within the beakless perithecia, and a few mature ascospores may be formed. Perithecia are fully fertile and morphologically normal in the reciprocal cross, where pen-1 is used as male to fertilize pen^+. Development is about equally abnormal in pen female x pen^+ male and in pen x pen. Perithecia are normal and fertile when the female parent is heterokaryotic for pen in the cross (pen-1;un-3 ad-3 nit-2 A + pen^+; a^m1 ad-3B cyh-1) female x pen-1 a male, even though all asci are homozygous for the mutant pen-1 allele. Allele DL413 was obtained and described by DeLange and Griffiths 1980 Genetics 96:367-378. Cytology by N.B. Raju. Mapping by Perkins, Pollard and F.M. Delagi

ufa(P73B118): unsaturated fatty acids

IVR. Linked to met-5 (7%). (Likely a recurrence of ufa-1/ufa-2, which were mapped to IV or V by Scott 1977, J. Bacteriol. 130:1144-1148)

Requirement and stability similar to those described for ufa-1 and ufa-2, stocks of which have been lost. Responds strongly to oleic acid and Tween 80 (oleic + palmitic), not to palmitic, Tween 40 (palmitic), stearic or linolenic acid, and weakly to linoleic (S. Brody, personal communication). Grows well on 1% Tween 80 supplement, but vegetatively unstable. Reversions produce conidiating sectors. Maintained reliably on minimal medium in heterokaryon with a^m1 ad-3B cyh-1. Unripe, light colored ascospores are probably enriched for revertants. Reliable mapping should be based on ufa^- progeny. Perithecia are barren in ufa x ufa crosses (made using heterokaryons).

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