Diploid 2478

is sbA cannot carry ssbA1

2439 (from 2475) SulA1 anA1 + biA1 AcuA1 + + + methG1 nicA2 + sbA3 + +

2372 (from 2472) + + adE20 biA1 + WA2 cnxE16 galA1 methG1 + facA303 + lacA1 sB3

= diploid # 108 / #487

malA1 + + chaA1

+ choA1 nboB2 chaA1

diploid 2475 = 2378 from cross 2460 = SulA1 anA1 biA1; ssbA1; lysB5 chaA

2260 proA1 biA1; AcuA1; methG1; nicA2; sbA3; malA1

from cross 1977

detailed pedigree available on request.