This strain, which we regard as being cys-11 (not cys-5) is extremely closely linked to mating type, and had not previously been obtained in m.t. a. It is useful for a variety of experiments because it can be obtained selectively from crosses in either direction: the wild type allele ($cys\text{-}11^+$) by plating on minimal, or the mutant allele (cys-11) by plating on a special medium containing selenate, to which cys-11 is resistant but to which its wild type allele is sensitive. Since the gene is very closely linked to mating type, all the colonies that form on a plate will be of the desired mating type, except for very rare crossovers. cys-11 is resistant because it cannot activate sulfate, and therefore cannot activate selenate either, and thus cannot make organoselenium compounds, which are toxic.

The selective selenate medium is as follows:

Fries salts in which $MgSO_4$ is omitted and $MgCl_2$ added in equimolar amt.
taurine added to 1 mM as sulfur source and methionine to 0.025 mM
Na_2SeO_4 to 1 mM
agar to 1.5 %

autoclave and add glucose to give 0.05%
fructose " 0.05%
sorbose to give 1.0%
The sugars are autoclaved separately to avoid carmelization.

The rare crossover, cys-11R503a was obtained by crossing cys-11A to wild type-a and plating ascospores to the above selective medium to give about 2000 colonies on ten plates. The colonies were replicated to fluffy-A plates and one that crossed was found to be cys-11a.