https://bdsc.indiana.edu/stocks/misc/sparc.html

Cross 1
Between the a female integrase line and any split gal4 line.

Female (X25)	**(J74) Male**
nSyb-PhiC31; S[1]/CyO; Pri[1]/TM6B, Tb[1]	w[1118]/y; AD/AD; DBD/DBD

You want to collect:

F1
nSyb-PhiC31/y; AD/CyO; DBD/TM6B, Tb **(Male, NO S[1], NO Pri[1])**

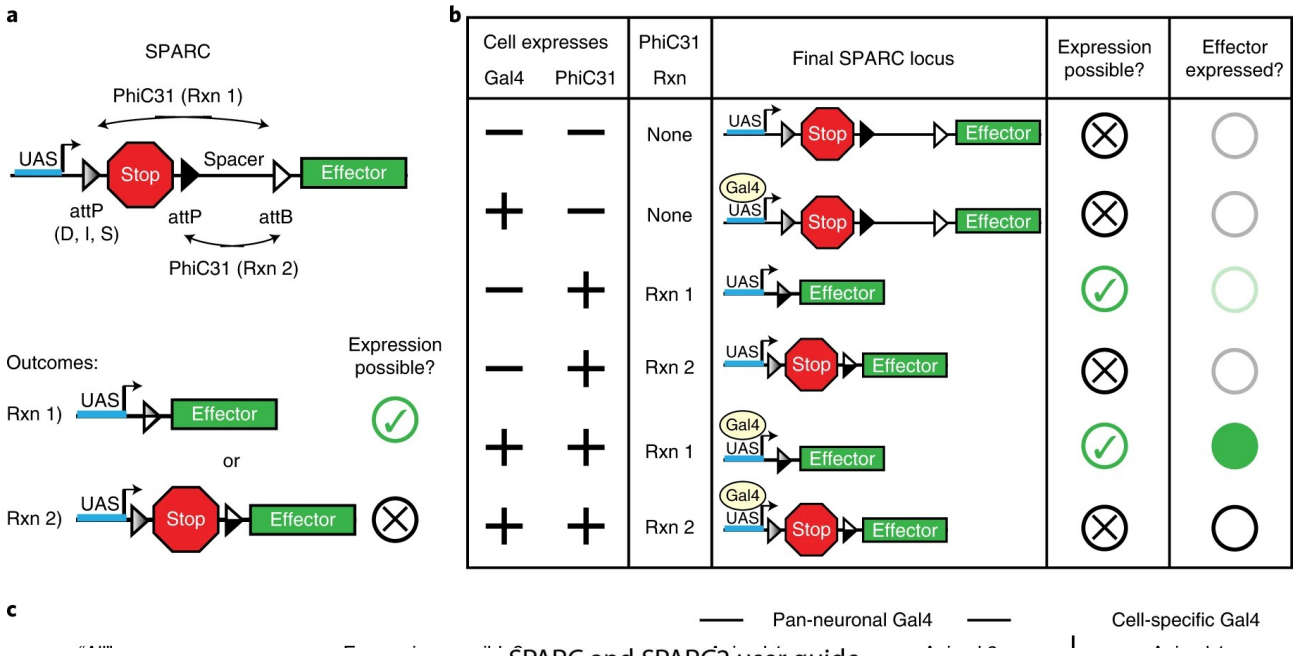
Cross 2
Then, cross that with any of the SPARC-Syn-CsChrimson lines (U57-U59).

Male F1	**(U58-59) Female**
nSyb-PhiC31/y; AD/CyO; DBD/TM6B, Tb	+; SPARC2-D-Syn21-CsChrimson; +

You want to collect:

F1
nSyb-PhiC31/+; AD/SPARC2-D-Syn21-CsChrimson; DBD/+ **(Female, NO CyO, NO TM6B,Tb)**

These should be allowed to adult until they are about 5-6 d/o, and then put on retinal for a day.



SPARC and SPARC2 user guide

a) Important notes:

1. SPARC and SPARC2 activity requires a minimum of three transgenes: 1) *SPARC-effector*, 2) *promoter-PhiC31*, and 3) *enhancer-GAL4*.
2. *SPARC-effector* or *SPARC2-effector* and *promoter-PhiC31* transgenes MUST be maintained in separate stocks. If both transgenes are present in the same fly, there is a possibility that unanticipated PhiC31 expression in the germline will lead to stable recombination of the *SPARC* or *SPARC2* cassette.
3. For all new *SPARC-effector* combinations, we recommend using SPARC2.

b) Example crossing schemes for SPARC or SPARC2

$$\frac{+}{+}\ ;\ \textit{SPARC2-Effector (near \{attP40\})}\ ;\ +\ \times\ \frac{+}{Y}\ ;\ \textit{promoter*-PhiC31 \{su(Hw)attP5\}}\ ;\ \textit{enhancer-Gal4 \{attP2\}}\quad \text{OR}$$

$$\frac{+}{+}\ ;\ \textit{SPARC2-LexA::p65 (near \{attP40\})}\ ;\ \textit{lexAop-effector (variable)}\ \times\ \frac{+}{Y}\ ;\ \textit{promoter*-PhiC31 \{su(Hw)attP5\}}\ ;\ \textit{enhancer-GAL4 \{attP2\}}$$

* Available stocks: *20XUAS-PhiC31*, *tub-PhiC31*, and *nSyb-PhiC31*

Using split-Gal4 Drivers:

$$\frac{+}{+}\ ;\ \textit{SPARC2-effector (near \{attP40\})}\ ;\ +\ \times\ \frac{\textit{promoter*-PhiC31 \{attp18\}}}{Y}\ ;\ \textit{enhancer-GAL4AD** \{attP40\}}\ ;\ \textit{enhancer-GAL4DBD \{attP2\}}\quad \text{OR}$$

$$\frac{+}{+}\ ;\ \textit{SPARC2-LexA::p65 (near \{attP40\})}\ ;\ \textit{lexAop-effector \{variable\}}\ \times\ \frac{\textit{promoter*-PhiC31 \{attp18\}}}{Y}\ ;\ \textit{enhancer-GAL4AD \{attP40\}}\ ;\ \textit{enhancer-GAL4DBD \{attP2\}}$$

* Available stocks: *20XUAS-PhiC31* and *nSyb-PhiC31*.

** Note: Janelia split-Gal4 drivers use the p65ADZp activating domain[21].