

Transgenic line production

P-element transgenic line production

- Injections are performed within 2 to 7 days upon arrival of the samples.
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- Survival larvae are picked up in 48 h after injection.
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- Injected larvae are reared in our lab at 25 °C to adulthood in 14 days.
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- 100 crosses is done after injection.
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- Screening and collection of the transformants are done 15 days after crossing.
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- The minimum turnaround time from reception of DNA samples to delivery of the larvae is 10 days and 6 weeks to get the transgenic flies.

PhiC31 site-specific transgenic line production

PhiC31 integrase transgenesis is based on the site-specific bacteriophage PhiC31 integrase which mediates construct integration between a bacterial attachment site (attB) and a phage attachment site (attP). Because the two sites recognized by the PhiC31 integrase differ and the recombination process mixes the two sites into two different sites (attR and attL),

PhiC31-based integration is irreversible. In practice, plasmids containing attB site and white marker are injected into strains containing attP-landing site with PhiC31 activity (visit the FlyC31 website for more info) resulting in stable w+ transformants containing your construct-of-interest between attL and attR sites.

As an additional advantage the site-specific system allows integration of large DNA fragments using P[acman] system (visit the Bellen lab for more info).

This system makes use of the combined tools of P1 and BAC construct, recombineering, and PhiC31-mediated transgenesis.

We propose injection of P[acman] vectors into attP landing strains carrying endogenous PhiC31 source developed by the Basler group (see currently available attP lines).

If requested, we can also inject into other attP lines (eg. from Bellen collection) or other lines provided by the customer.

We will put
more attP lines available once their efficiency and enhancer trap effect tested.