Dec 16, 2019

Long term effect of Aldicarb on C. elegans

DOI
dx.doi.org/10.17504/protocols.io.baiwicfe

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Behavioural Genomics

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OPEN ACCESS

DOI: dx.doi.org/10.17504/protocols.io.baiwicfe

Protocol Citation: Priota Islam 2019. Long term effect of Aldicarb on C. elegans. **protocols.io https://dx.doi.org/10.17504/protocols.io.baiwicfe**

Protocol status: Working
We use this protocol and it's working

Created: December 16, 2019

Last Modified: December 16, 2019

Protocol Integer ID: 31030

Abstract

- Aldicarb is a cholinesterase inhibitor which prevents the breakdown of acetylcholine in the synapse
- Reported to paralyze C. elegans
- Strains of interest believed to be resistant to the paralytic effect
- Strains: OW1601 & OW1603

1 Bleach synchronize the worms on a Friday

2 Following Monday, seed 4 maintenance plates with OP50 and dry under hood

3 Add 150ul of Aldicarb solution to the 4-maintenance plate to reach a final concentration of 3uM and leave to absorb overnight

4 The following day (Tuesday), refeed the arrested L1s on the treatment plates and normal OP50 seeded plates i.e. OW1601 L1s refed on 2×3uM aldicarb plate + 2xnormal OP50 seeded plate. Same for OW1603. So, each strain will have two control plates and two treatment plates- Total 8 plates

5 Keep one set of plates at 25C and the other set at 20C

6 The day before tracking (Thursday) add 35ul of 300uM AK to 24 imaging plates

7 Also, seed those drugs treated 24 imaging plates and additional 24 non-treated imaging plates with 50ul of 1:10 OP50 and leave to dry O/N

8 On the day of tracking (Friday), transfer 5 worms onto each imaging plate and image for 15mins on Phenix

Track 8 sets: (2 treatment sets + 2 control sets with no treatment) x 2 growth temperatures