**Table S5.** Interactions tested by expression epistasis.

|  |  |  |
| --- | --- | --- |
| **Transgene** | **Mutant background or RNAi treatment** | **Expression pattern or localization different from wild type?** |
| *dmd-3>yfp* | *php-3(ok919)* | yes |
| *dmd-3>yfp* | *php-3(ok919);nob-1(RNAi)* | yes |
| *dmd-3>yfp* | *egl-18(ok290);elt-6(RNAi)* | yes |
| *dmd-3>yfp* | *nhr-25(ku217)* | yes |
| *dmd-3>yfp* | *blmp-1(tm548)* | yes |
| *nhr-25>NLS::gfp* | *mab-3(e1240);dmd-3(ok1327)* | yes |
| *sma-3::cfp* | *mab-3(e1240);dmd-3(ok1327)* | yes |
| *vav-1>NLS::gfp* | *mab-3(e1240);dmd-3(ok1327)* | yes |
| *rme-8::gfp* | *mab-3(e1240);dmd-3(ok1327)* | yes |
| *nmy-2::mCherry* | *mab-3(e1240);dmd-3(ok1327)* | yes |
| *arl-1::gfp* | *mab-3(e1240);dmd-3(ok1327)* | yes |
|  |  |  |
| *inx-12>yfp* | *mab-3(e1240);dmd-3(ok1327)* | no |
| *inx-13>cfp* | *mab-3(e1240);dmd-3(ok1327)* | no |
| *egl-18::gfp* | *php-3(ok919)* | no |
| *nob-1::gfp* | *sma-3(e491)* | no |
| *rme-8::gfp* | *php-3(ok919)*2 | no |
| *nhr-25>NLS::gfp* | *blmp-1(tm548)*3 | no |
| *blmp-1::gfp* | *lin-41(bx37)* | no |
| *blmp-1::gfp* | *php-3(ok919)* | no |
| *nob-1::gfp* | *lin-41(RNAi)* | no |
| *daf-4::yfp* | *dmd-3(ok1327)* | no |
| *daf-4>NLS::gfp* | *dmd-3(ok1327)* | no |
| *daf-4::yfp* | *php-3(ok919)* | no |

1Adult expression was not altered in the *php-3(ok919)* background as compared to wildtype.

2Localization during L4 (i.e. prior to and during morphogenensis) was not changed in *php-3(ok919)* mutants.

3Adults did not show male tail expression which is similar to wildtype.