**Table 2.** Strain and plasmids used in this study

|  |  |  |
| --- | --- | --- |
| **Strain** | Relevant characteristics | Source or references |
| ***E. coli*** |  |  |
| DH5α | *supE44 ΔlacU169* (Φ80 *lacZ ΔM15*) *hsdR17 recA1 endA1 gyrA96 thi-1 relA1* | Invitrogen |
| **Plasmids** |  |  |
| pKS-3HA.NEO | Shuttle vector, AmpR, *neo* gene | [17] |
| mNeonGreen-mRuby2-FRET-10 | KanR, 711-bp encoding *mNeonGreen* gene | Addgene #58179 |
| pKS-N11-mNG.NEO | pKS-3HA.NEO, 11 amino acid flexible linker and 711-bp encoding *mNeonGreen*  | This study |
| pIFT20-mNG.NEO | pKS-N11-mNG.NEO, 150-bp promoter region and 420-bp encoding *ift20* gene (GL50803\_3581) | This study |
| pIFT46-mNG.NEO | pKS-N11-mNG.NEO, 150-bp promoter region and 957-bp encoding *ift46* gene (GL50803\_7664) | This study |
| pIFT52-mNG.NEO | pKS-N11-mNG.NEO, 150-bp promoter region and 1,257-bp encoding *ift52* gene (GL50803\_004095) | This study |
| pIFT81-mNG.NEO | pKS-N11-mNG.NEO, 120-bp promoter region and 2,016-bp encoding *ift81* gene (GL50803\_15428) | This study |
| pIFT88-mNG.NEO | pKS-N11-mNG.NEO, 150-bp promoter region and 2,493-bp encoding *ift88* gene (GL50803\_0016660) | This study |
| pIFT121-mNG.NEO | pKS-N11-mNG.NEO, 150-bp promoter region and 4,623-bp encoding *ift121* gene (GL50803\_87817) | This study |
| pIFT140-mNG.NEO | pKS-N11-mNG.NEO, 150-bp promoter region and 5,787-bp encoding *ift140* gene (GL50803\_17251) | This study |
| pKin2b-mNG.NEO | pKS-N11-mNG.NEO, 150-bp promoter region and 1,926-bp encoding *kinesin-2b* gene (GL50803\_16456) | This study |
| pKin13-mNG.NEO | pKS-N11-mNG.NEO, 117-bp promoter region and 2,142-bp encoding *kinesin-13* gene (GL50803\_16945) | This study |
| pdCas9.PAC | AmpR, Puromycin resistance cassette, HA-tagged *dCas9* gene from *Giardia* maltose dehydrogenase promoter, guide RNA expressing cassette  | This study |
| psCas9-gCont | pdCas9.PAC, control guide RNA expressing cassette | This study |
| pdCas9-IFT88-g33 | pdCas9.PAC, IFT88 guide RNA expressing cassette  | This study |
| pdCas9-IFT88-g258 | pdCas9.PAC, IFT88 guide RNA expressing cassette | This study |
| pdCas9-IFT88-g455 | pdCas9.PAC, IFT88 guide RNA expressing cassette | This study |
| pdCas9-Kin2b-g21 | pdCas9.PAC, kinesin-2b guide RNA expressing cassette | This study |
| pdCas9-Kin2b-g141 | pdCas9.PAC, kinesin-2b guide RNA expressing cassette | This study |
| pdCas9-Kin2b-g271 | pdCas9.PAC, kinesin-2b guide RNA expressing cassette | This study |

Amp, ampicillin; Kan, kanamycin; R, resistant; HA, hemagglutinin.