**Supplementary File 2**

Identification (method of ID, marker and strain indicated for each neuron) to determine *ckr-1* expressing neurons. \* Indicated strains were crossed into *ufIs141* *(Pckr-1::ckr-1::SL2::GFP)* to generate strains to determine colocalization. # + or – indicates presence or absence of *ckr-1* expression in identified neuron.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Neuron type** | **Neuron class** | ***ckr-1* #** | **Method of identification** | **Marker**  | **Strain\*** | **Reference** |
| Sensory | ASK | + | DiI staining |  |  |  |
| ASI | + | DiI staining |  |  |  |
| AWB | + | DiI staining |  |  |  |
| ASH | + | DiI staining |  |  |  |
| PHA | + | Dye uptake |  |  |  |
| PHB | + | Dye uptake |  |  |  |
| NSM (motor+ sensory) | + | Anatomical + colocalization\* | *Ptph-1::GFP* | *mgIs42* | (Sze et al., 2000) |
| IL1, IL2  | - |  |  |  |  |
| OLQ, OLV  | - |  |  |  |  |
| BAG | - |  |  |  |  |
| Interneuron | AIA (Ach) | + | Colocalization\* | *Psra-11::GFP* | *otIs123* | (Altun-Gultekin et al., 2001) |
| AIY  | - | Colocalization\*  | *Pttx-3::GFP* | *mgIs18* | (Hobert et al., 1997) |
| AIB (Ach) | + |  | *Podr-2(2b)::GFP* | *kyIs51* | (Chou et al., 2001) |
| AVL (GABA) | + | Colocalization\* | *Punc-47::GFP* | *oxIs12* | (McIntire et al., 1997) |
| RIS (GABA) | + | Colocalization\* | *Punc-47::GFP* | *oxIs12*  |  |
| RIG (glutamate) | + | Colocalization\* | *Podr-2(18)::GFP* | *ufEx863* | (Chou et al., 2001) |
| RIS  | + | Colocalization\*  | *Pser-4::GFP* | *adEx1616* | (Gürel et al., 2012) |
| PVQ | + | Colocalization\*  | *Psra-6::GFP* | *oyIs14*  | (Aurelio et al., 2003) |
| Head motor | RMEV/D | + | Colocalization\* | *Punc-47::GFP* | *oxIs12* |  |
| SMDV/D | + | Colocalization\* | *Plad-2::GFP**Plgc-55::GFP**Podr-2(16)::GFP**Pflp-22(∆4)::GFP* | *otIs337* *zfIs6**ufEx1485**ufEx1504* | (Wang et al., 2008)(Pirri et al., 2009)(Chou et al., 2001)(Yeon et al., 2018) |
| RIV | + | Colocalization\* | *Pnpr-4::RFP* | *dbEx721* | (Cohen et al., 2009) |
| Ventral cord motor | CholinergicVA/VB/DA/DB | + | Colocalization\* | *Punc-17::GFP**Pacr-2::mCherry* | *vsIs48* *ufIs43* | (Alfonso et al., 1993)(Petrash et al., 2013) |
| GABAergic | - | Colocalization\* | *Punc-47::GFP* | *oxIs12* |  |

\* Indicated strains were crossed into *ufIs141* to generate strains to determine colocalization

# + indicates *ckr-1* expression, - indicates absence

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