## Supplementary files

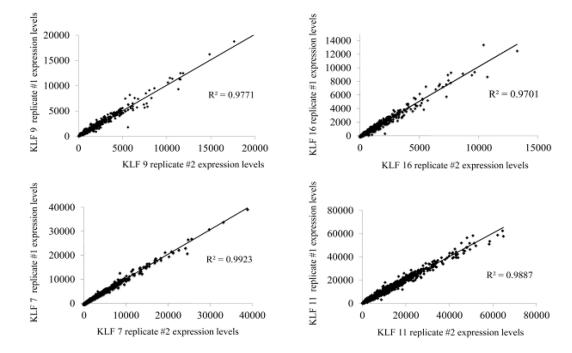
**Supplementary Figure 1. Intersample variability in microarray after viral transduction of KLFs.** Intersample variability amongst the biological replicates was very low in each of the KLF-transduced RGC groups. Shown here are examples of the first two samples from each group analyzed.

Supplementary Table 1. Regulation of KLFs by other KLF family members. Fold change comparison between KLF family members and axon growth regulators KLF9 (repressor), KLF16 (repressor), KLF1 (promoter) and KLF11 (none).

Supplementary Table 2. Target candidate probes satisfying all of screening criteria.

Fold change comparison between candidate probes and KLF9 (repressor), KLF16 (repressor), KLF7 (promoter) and KLF11 (none).

## **Extended Data Figure 1**



Extended Data Table 1. Regulation of KLFs by other KLF family members.

| Probe ID     | Gene<br>Symbol | FC by<br>KLF9 | FC by<br>KLF16 | FC by<br>KLF7 | FC by<br>KLF11 | Effect on<br>Axon<br>Growth* | KLF Family*                          |
|--------------|----------------|---------------|----------------|---------------|----------------|------------------------------|--------------------------------------|
| 1382033_at   | Klf1           | 3.13          | 1.00           | 1.00          | 1.00           | Repressor                    | Acidic and Inhibitory domains        |
| 1375248_at   | Klf2           | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | Acidic and Inhibitory domains        |
| 1376569_at   | Klf2           | 1.82          | 1.00           | -7.36         | 1.00           | Repressor                    | Acidic and Inhibitory domains        |
| 1386040_at   | Klf2           | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | Acidic and Inhibitory domains        |
| 1386041_a_at | Klf2           | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | Acidic and Inhibitory domains        |
| 1394068_x_at | Klf2           | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | Acidic and Inhibitory domains        |
| 1387260_at   | Klf4           | 1.77          | 1.00           | 1.00          | 1.00           | Repressor                    | Acidic and Inhibitory domains        |
| 1375177_at   | Klf13          | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | ВТЕВ                                 |
| 1383013_at   | Klf13          | -21.44        | -3.22          | 1.82          | 1.00           | Repressor                    | BTEB                                 |
| 1374231_at   | Klf16          | -1.38         | 1.00           | 4.32          | 1.00           | Repressor                    | BTEB                                 |
| 1370209_at   | KIf9           | -1.62         | 1.00           | 1.00          | 1.00           | Repressor                    | BTEB                                 |
| 1387882_at   | KIf9           | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | BTEB                                 |
| 1368249_at   | Klf15          | 7.09          | 2.60           | 1.00          | 1.00           | Repressor                    | grey group in Science paper*         |
| 1381395_at   | Klf15          | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | grey group in Science paper*         |
| 1381396_s_at | Klf15          | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | grey group in Science paper*         |
| 1368363_at   | Klf5           | 3.24          | 1.00           | 1.00          | 1.00           | Repressor                    | grey group in Science paper*         |
| 1385961_at   | Klf5           | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | grey group in Science paper*         |
| 1394039_at   | Klf5           | 1.92          | 1.00           | 1.00          | 1.56           | Repressor                    | grey group in Science paper*         |
| 1398159_at   | Klf5           | 1.00          | 1.00           | 1.00          | 1.00           | Repressor                    | grey group in Science paper*         |
| 1387060_at   | Klf6           | 1.37          | 1.00           | -1.69         | 1.00           | Promoter                     | Acidic and Hydrophobic S-rich domain |
| 1377618_at   | KIf7           | 1.00          | 1.00           | 1.00          | 1.00           | Promoter                     | Acidic and Hydrophobic S-rich domain |
| 1380363_at   | KIf7           | 1.00          | 1.00           | 4.08          | 1.00           | Promoter                     | Acidic and Hydrophobic S-rich domain |
| 1384497_at   | Klf7           | 1.00          | 1.00           | 1.00          | 1.00           | Promoter                     | Acidic and Hydrophobic S-rich domain |
| 1391471_at   | KIf7           | 1.00          | 1.00           | 1.00          | 1.00           | Promoter                     | Acidic and Hydrophobic S-rich domain |
| 1385545_at   | Klf12          | 1.00          | 1.00           | 1.00          | 1.00           | None                         | PVALS/T                              |
| 1378332_at   | Klf3           | 1.00          | 1.00           | 2.06          | 1.00           | None                         | PVALS/T                              |
| 1389479_at   | Klf3           | 1.00          | 1.00           | 1.84          | 1.00           | None                         | PVALS/T                              |
| 1393150_at   | KIf3           | 1.00          | 1.00           | 2.33          | 1.00           | None                         | PVALS/T                              |
| 1368650_at   | Klf10          | -1.61         | 1.00           | 4.10          | -8.31          | None                         | TIEG                                 |

FC, fold-change. \*As described in Moore DL, et al., Science (2009)<sup>10</sup>

Extended Data Table 2. Target candidate probes satisfied all of screening criteria.

| Probe ID   | Gene Symbol | FC in KLF9 | FC in KLF16 | FC in KLF7 | FC in KLF11 | Corrected p-value |
|------------|-------------|------------|-------------|------------|-------------|-------------------|
| 1381246_at | Rn.109718   | 9.4144     | 3.8510      | -2.5461    | 1.0000      | 0.0126            |
| 1390119_at | Sfrp2       | 9.0695     | 3.7613      | -2.7319    | 1.0000      | 0.0356            |
| 1374971_at | Rn.16576    | 7.5644     | 3.1264      | -2.3583    | 1.0000      | 0.0457            |
| 1390219_at | Wdr19       | 6.5807     | 2.4275      | -1.4894    | 1.0000      | 0.0001            |
| 1383541_at | Nagpa       | 6.1758     | 2.8520      | -1.1003    | 1.0000      | <0.0001           |
| 1377789_at | Rn.13199    | 6.0207     | 3.0021      | -2.2092    | 1.0000      | 0.0121            |
| 1383380_at | Rpp38       | 5.5618     | 2.7613      | -2.2113    | 1.0000      | 0.0169            |
| 1391125_at | Ap1s3       | 5.4617     | 2.6528      | -1.9369    | 1.0000      | 0.0296            |
| 1374759_at | Galntl1     | 5.4034     | 3.1317      | -2.1237    | 1.0000      | 0.0146            |
| 1383661_at | Rn.15645    | 4.8578     | 2.2618      | -1.9907    | 1.0000      | 0.0406            |
| 1395518_at | Rn.34553    | 4.8344     | 2.1367      | -2.9538    | 1.0000      | 0.0280            |
| 1388744_at | Mcm7        | 4.2993     | 3.0345      | -1.9648    | 1.0000      | 0.0139            |
| 1389385_at | B9d1        | 4.2060     | 1.7928      | -1.4715    | 1.0000      | <0.0001           |
| 1394472_at | Rgl1        | 3.9394     | 2.3532      | -2.0787    | 1.0000      | 0.0402            |
| 1368045_at | Slc31a1     | 3.9002     | 2.0903      | -1.4042    | 1.0000      | <0.0001           |
| 1389137_at | Cit         | 3.6013     | 2.5055      | -2.7198    | 1.0000      | 0.0463            |
| 1389729_at | Rilpl2      | 3.4976     | 1.8876      | -1.6979    | 1.0000      | 0.0331            |
| 1393743_at | Rn.34553    | 3.4666     | 2.0048      | -3.9919    | 1.0000      | 0.0046            |
| 1369989_at | Pnpo        | 3.3757     | 2.4578      | -1.4789    | 1.0000      | <0.0001           |
| 1388534_at | Rn.95113    | 3.2356     | 1.9669      | -1.4933    | 1.0000      | <0.0001           |
| 1373324_at | Dusp14      | 3.2327     | 2.0832      | -1.6994    | 1.0000      | 0.0120            |
| 1376989_at | Rn.14653    | 3.2270     | 2.3526      | -2.2980    | 1.0000      | 0.0022            |
| 1381984_at | Rn.24648    | 3.2057     | 1.8007      | -1.2260    | 1.0000      | <0.0001           |
| 1387966_at | Asrgl1      | 3.1794     | 1.6783      | -1.5482    | 1.0000      | 0.0215            |
| 1384025_at | Rn.7560     | 3.0945     | 2.4931      | -1.4680    | 1.0000      | <0.0001           |
| 1388699_at | Man2b1      | 3.0514     | 1.6837      | -1.5840    | 1.0000      | 0.0221            |
| 1375932_at | Rn.163618   | 3.0438     | 1.5543      | -2.2797    | 1.0000      | 0.0159            |

FC, fold-change.