

Fig. S1. RNA-seq analysis work flow

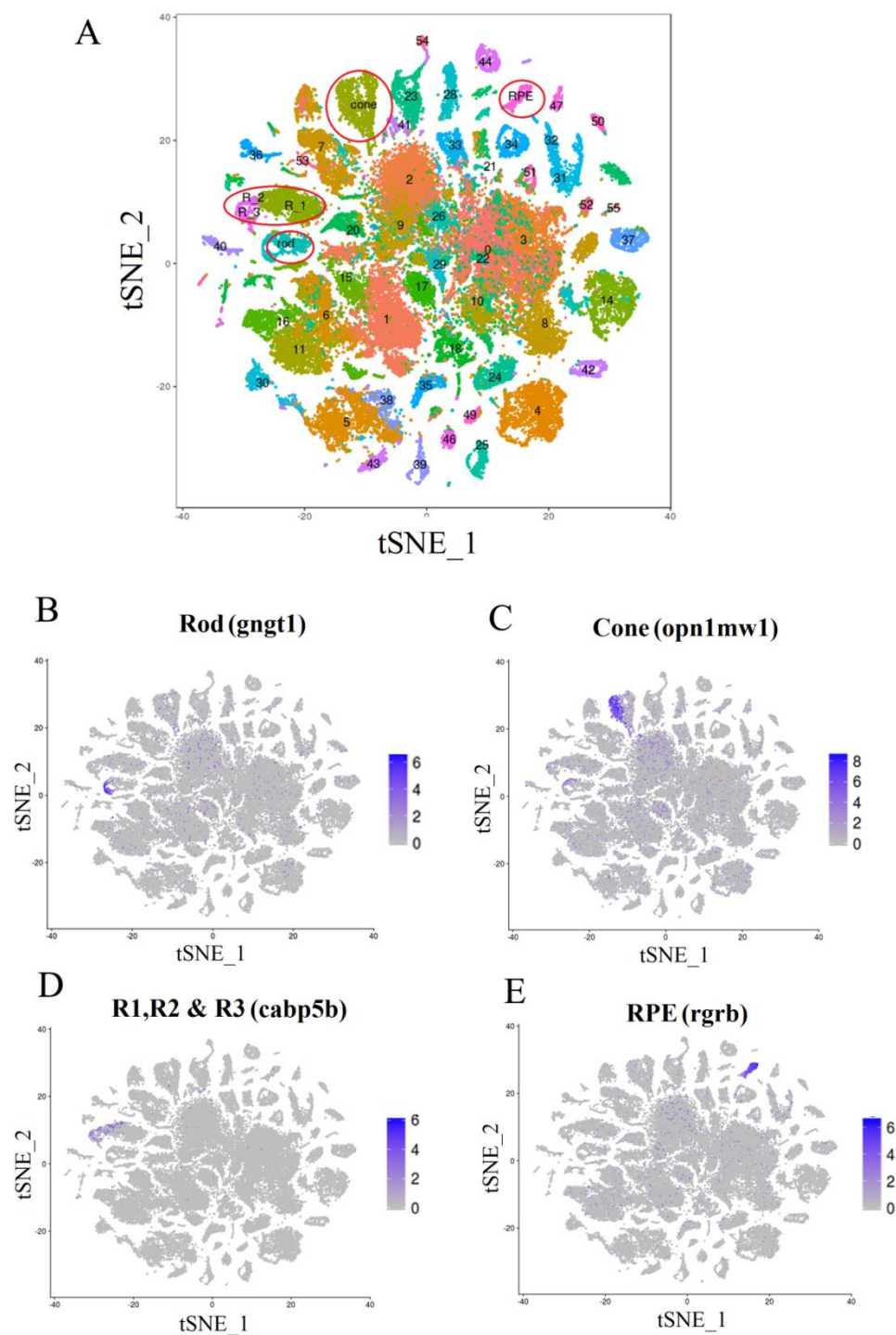


Fig. S2. Single cell transcriptome based cell clusters and marker gene expression pattern

A. tSNE representation of 55 distinct cell type clusters indicated by colour and numerical code. Retina associated cell type clusters were indicated by red circle. R_1, R_2 and R_3 are clusters encompass cell types of INL.

B-C.tSNE representation of cell type specific marker gene expression

Table S1. list of differentially expressing genes

ZT4 (day) upregulated genes are unshaded, while dark shade indicates genes upregulated in ZT16(night), of which novel transcripts are highlighted by blue shade.

[Click here to Download Table S1](#)

Table S2. qRT-PCR primers

Primer name	Sequence (5' to 3')
pc1_F	TGGACGGGGCATAAACATCC
pc1_R	GTGGACGGTAGAGCGTGTAG
pc2_F	TCCATCTCCATGGGGGACTT
pc2_R	CACGTATAGTTCGCCCTGCT
pc3_F	ACGCTATGGAAAGGTTTTGGT
pc3_R	ACCACTGTACTAGAGGGCAC
pc4_F	TGCTCTTCTTCTTGAGCATCATT
pc4_R	ACTTCATACTTGAGGTATCTACGG
pc5_F	GTTTTCAGCACCGAGCGTTT
pc5_R	AGGCTTGCTGTACAAGGGAC

pc6_F	GGAACGCTTCCCGTGTTAATG
pc6_R	ATTCAAGCATCCTGCGTTTCC
pc7_F	ACTCGCTCGGAACCAGTAAA
pc7_R	CAGAGACGGAACCAGCACAC
pc8_F	ACATTACTGAGGCATGTTTCCTT
pc8_R	GTCTTCCTTTAGTTTTTGCACAGT
pc9_F	ATGGATGGTCTTGGCACTGA
pc9_R	GCTAATAAGGCCTCCCCACT
pc10_F	CCACCCTTTCACCGCTTCTA
pc10_R	TGTCCGGGGATCAGAGATGT
pc11_F	CCCGGTTCAACGAACAGAAC
pc11_R	ACCGCCAAATGCCTTCTTCC
pc12_F	ATGGATGGTCTTGGCACTGA
pc12_R	GCTAATAAGGCCTCCCCACT
pc13_F	GAACGGGAATATCCGCGAGT
pc13_R	CAGGCTGTACAGTTCCCACA
pc14_F	TGCCAGTCTGGTGCAAGAAG
pc14_R	CCTCCACTGTAAGTGGGATCT
aanat1_F	GGACCAGGACCGTCTGACT
aanat1_R	CTGCAAGTAACGCCACAAGA
aanat2_F	CGACGAAACAGCGGATGTTAG

aanat2_R	GAACCTTTGAGCCTGTGATCG
per2_F	CTCTGGACGGCAGTGAGAAT
per2_R	CACAGCACCTTCTGGATGTC
β actin_F	CTCTTCCAGCCTTCCTTCCT
β actin_R	CTTCTGCATACGGTCAGCAA

Table S3. Primers used for making riboprobes

Primer name	Sequence (5' to 3')
pc1_F	ACGGAGGTTGCCGAAAGTAG
pc1_R	GCATCATGGCTGCGAAGTTT
pc2_F	TCCATCTCCATGGGGGACTT
pc2_R	GCATCTGTTGGTGTGATGCC
pc5_F	GGCACCGACCATATGGGAAA
pc5_R	TTGATGCATTTCCCCTCCCC
pc6_F	TGGCTCTTGTGGGTCAAATACA
pc6_R	CCGTTTGTCTGCATATAGGTGTAA
pc7_F	CTTCCTGTCCACTGCGGTTC
pc7_R	TGTGTAGCGCATGCCTGAT
pc8_F	GGATGATGAAGGCGGTGAGAA
pc8_R	AGGTGCGACTCTAATCACATAC
pc10_F	TGTACTCCACCCTTTCACCG
pc10_R	GGCGGATGCTCTGTTTTAGC
pc13_F	GCGCGTTGTAGAATGACGGA
pc13_R	CAAGGTTTTAGGCTATCCGCAC
aanat2_F	CACCACTGAGACGAGCAGAC
aanat2_R	CAGCATCTGTCCAAACCCGA

Table S4. Genomic co-ordinates of novel transcripts – Zv9

Transcript name	Genomic co-ordinates (zv9) used in GWIPs-viz
pc1	chr10:33,745,072-33,753,939
pc2	chr17:27,017,982-27,026,003
pc3	chr19:17,538,911-17,539,312
pc4	chr2:48,917,624-48,917,907
pc5	chr21:8,040,849-8,046,112
pc6	chr21:8,046,279-8,048,018
pc7	chr12:48,295,723-48,428,717
pc8	chr14:48,580,087-48,608,888
pc9	chr24:27,725,833-27,730,072
pc10	chr12:33,866,565-33,870,846
pc11	chr12:33,868,347-33,870,846
pc12	chr3:27,856,940-27,859,362
pc13	chr8:1,433,308-1,434,308
pc14	chr8:30,533,298-30,533,512