Supplemental Data File 4:

Genes Regulated by Caloric Restriction Have Unique Roles within Transcriptional Networks

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This file shows plots of the local connectivity index for CR−regulated genes with respect to each of four independent datasets (Tissue, Developmental, Treatment and Mutation Series). The local connectivity index is directly related to the density of the local region immediately surrounding a given gene within the transcriptional network. Green symbols correspond to genes downregulated by CR, while red symbols correspond to genes upregulated by CR. The dashed green line represents the average local connectivity index among the n = 12 CR−downregulated genes, while the dashed red line represents the average local connectivity index among the n = 16 CR−upregulated genes. Dashed black lines were generated by sampling n transcripts at random and calculating the average local connectivity index within each sample. Among 10,000 simulations, 95% of trials yielded an average local connectivity index within the range indicated by the dashed black lines (see Figure 3).

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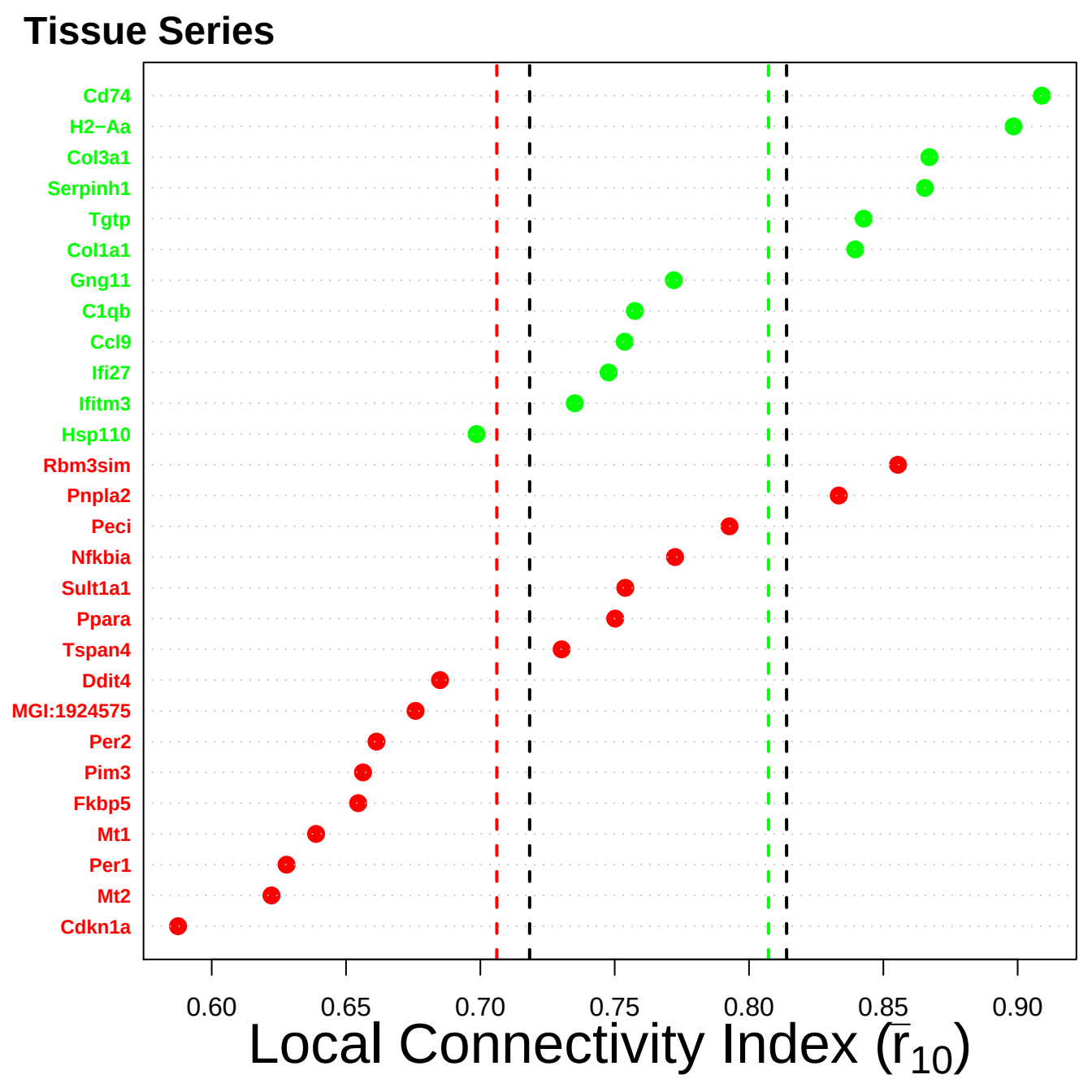
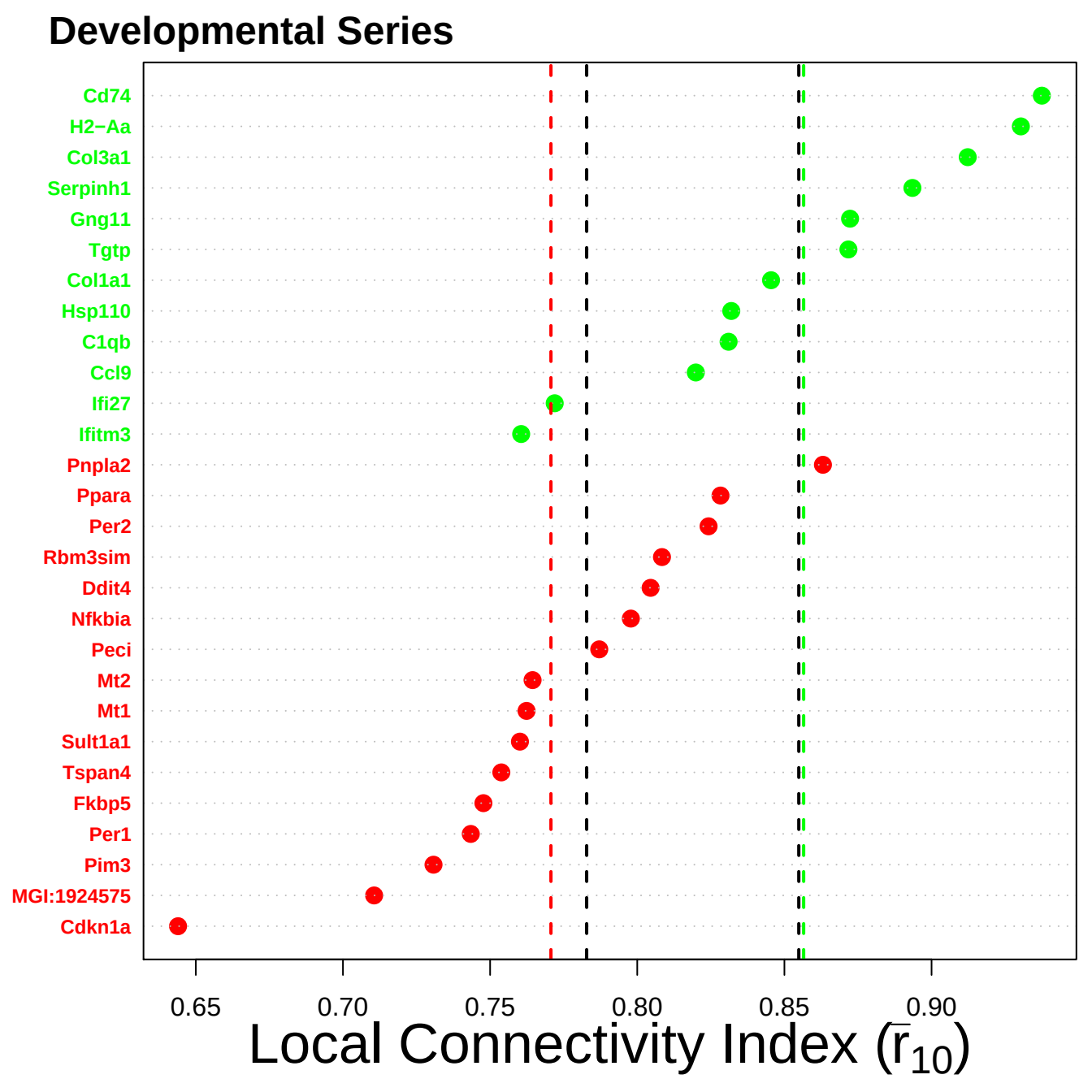
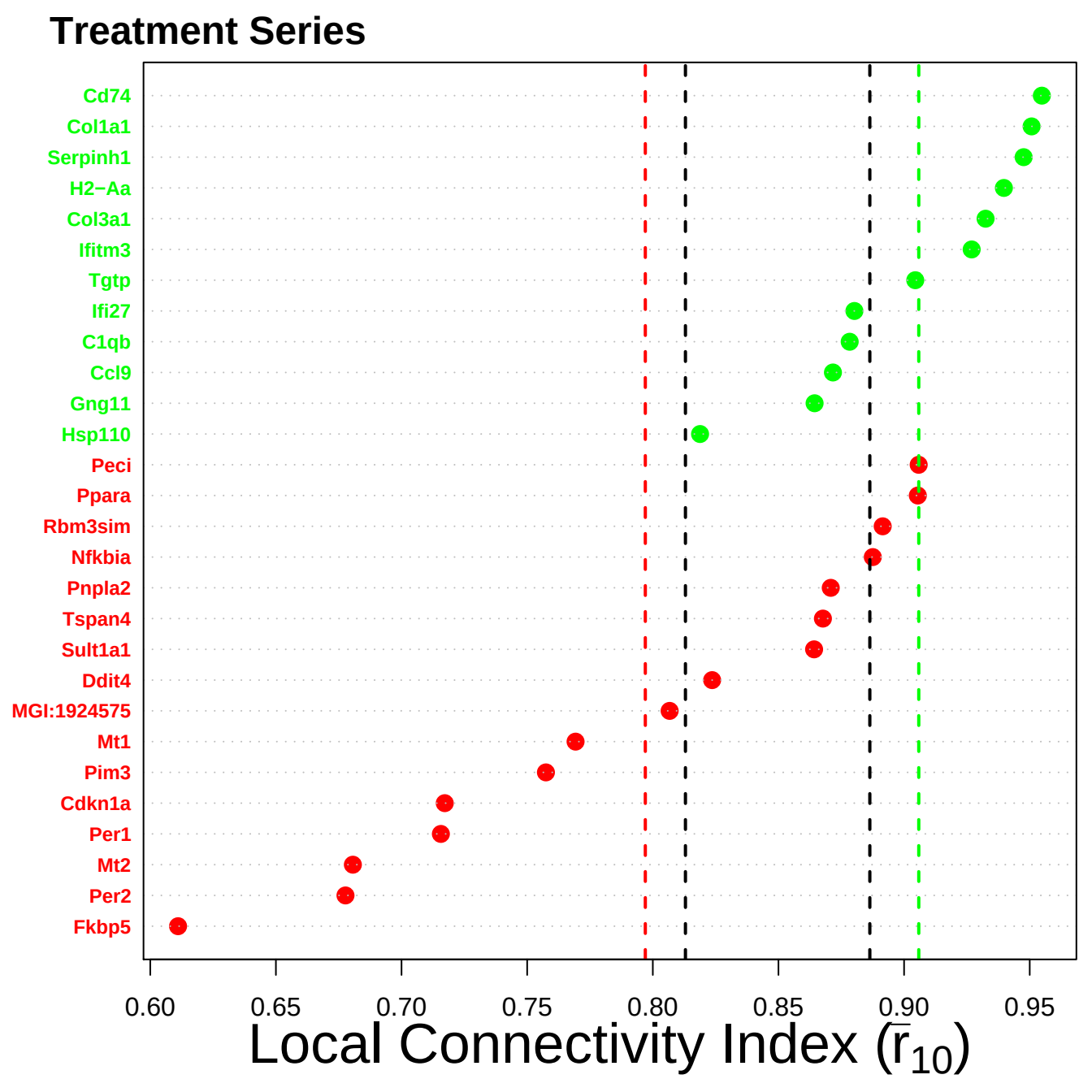
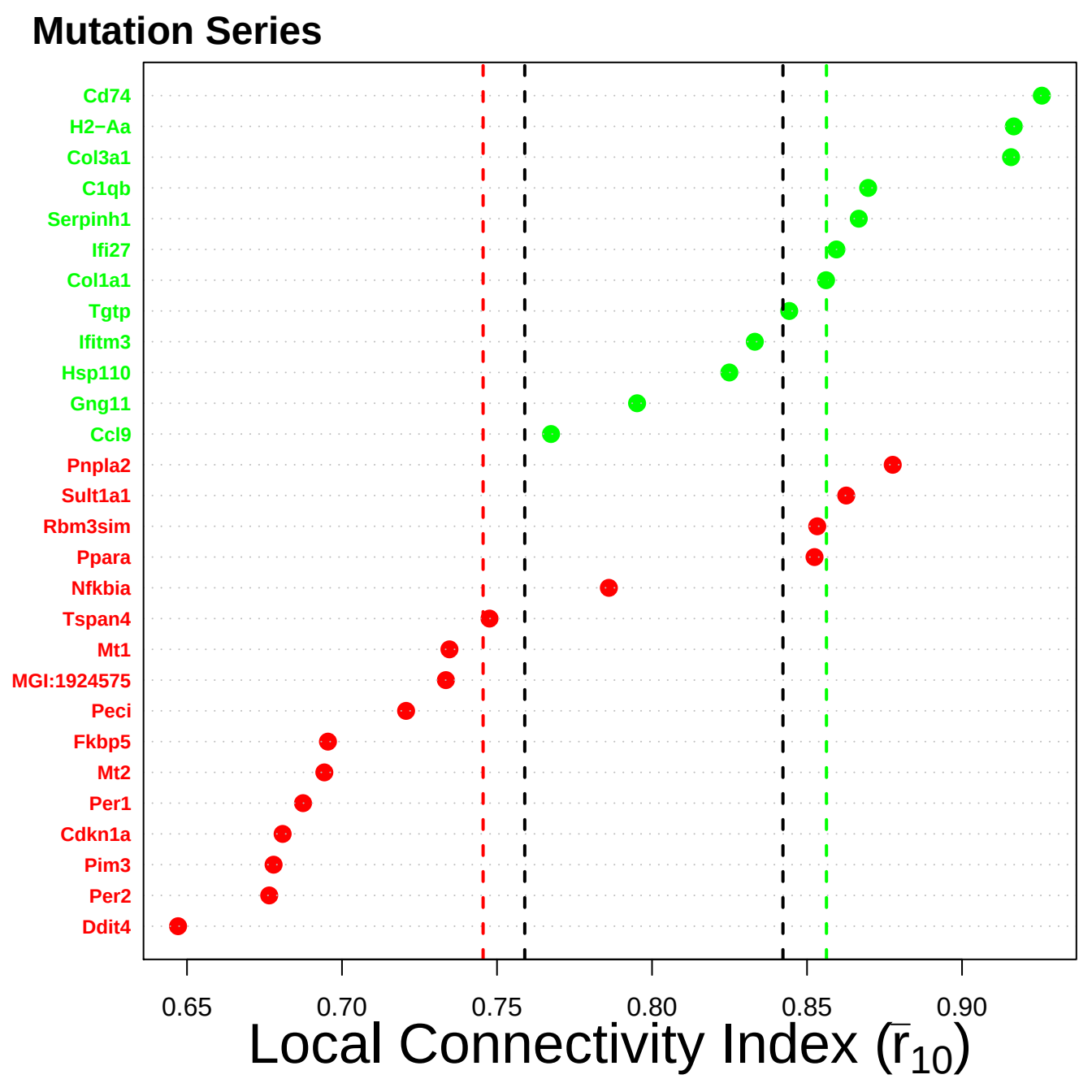

Tissue Series
Cd74
H2−Aa
Col3a1
Serpinh1
Tgtp
Col1a1
Gng11
C1qb
Ccl9
Ifi27
Ifitm3
Hsp110
Rbm3sim
Pnpla2
Peci
Nfkbia
Sult1a1
Ppara
Tspan4
Ddit4
MGI:1924575
Per2
Pim3
Fkbp5
Mt1
Per1
Mt2
Cdkn1a
0.60
0.65
0.70
0.75
0.80
0.85
0.90
Local Connectivity Index ($\bar{r}_{10}$)


Developmental Series
Cd74
H2−Aa
Col3a1
Serpinh1
Gng11
Tgtp
Col1a1
Hsp110
C1qb
Ccl9
Ifi27
Ifitm3
Pnpla2
Ppara
Per2
Rbm3sim
Ddit4
Nfkbia
Peci
Mt2
Mt1
Sult1a1
Tspan4
Fkbp5
Per1
Pim3
MGI:1924575
Cdkn1a
0.65
0.70
0.75
0.80
0.85
0.90
Local Connectivity Index ($\bar{r}_{10}$)


Treatment Series
Cd74
Col1a1
Serpinh1
H2−Aa
Col3a1
Ifitm3
Tgtp
Ifi27
C1qb
Ccl9
Gng11
Hsp110
Peci
Ppara
Rbm3sim
Nfkbia
Pnpla2
Tspan4
Sult1a1
Ddit4
MGI:1924575
Mt1
Pim3
Cdkn1a
Per1
Mt2
Per2
Fkbp5
0.60
0.65
0.70
0.75
0.80
0.85
0.90
0.95
Local Connectivity Index ($\bar{r}_{10}$)


Mutation Series
Cd74
H2−Aa
Col3a1
C1qb
Serpinh1
Ifi27
Col1a1
Tgtp
Ifitm3
Hsp110
Gng11
Ccl9
Pnpla2
Sult1a1
Rbm3sim
Ppara
Nfkbia
Tspan4
Mt1
MGI:1924575
Peci
Fkbp5
Mt2
Per1
Cdkn1a
Pim3
Per2
Ddit4
0.65
0.70
0.75
0.80
0.85
0.90
Local Connectivity Index ($\bar{r}_{10}$)