cell wall organization or biogenesis Without CellCycle | With AreaShape | All Genes Cluster 39/40 -2 6 **Functional Enrichment**

cell wall organization or biogenesis Without CellCycle | With AreaShape | No Vesicle Cluster 38/39 2 6 **Functional Enrichment**

cell wall organization or biogenesis Without CellCycle | With AreaShape | Nonessential Only Cluster 11/23 2 6 **Functional Enrichment**

cellular amino acid metabolic process Without CellCycle | With AreaShape | Nonessential Only Cluster 6/23 ó 3 **Functional Enrichment**

cellular response to DNA damage stimulus Without CellCycle | With AreaShape | All Genes Cluster 29/40 -Cluster 13/40 -2.5 5.0 7.5 0.0 **Functional Enrichment**

cellular response to DNA damage stimulus Without CellCycle | With AreaShape | Essential Only Cluster 23/26 2 **Functional Enrichment**

cellular response to DNA damage stimulus Without CellCycle | With AreaShape | No Vesicle Cluster 28/39 -Cluster 4/39 2.5 5.0 7.5 0.0 **Functional Enrichment**

cellular response to DNA damage stimulus Without CellCycle | With AreaShape | Nonessential Only Cluster 21/23 -Cluster 15/23 Cluster 8/23 2.5 10.0 7.5 0.0 5.0 **Functional Enrichment**

chromatin organization Without CellCycle | With AreaShape | All Genes Cluster 30/40 -Cluster 13/40 -

2

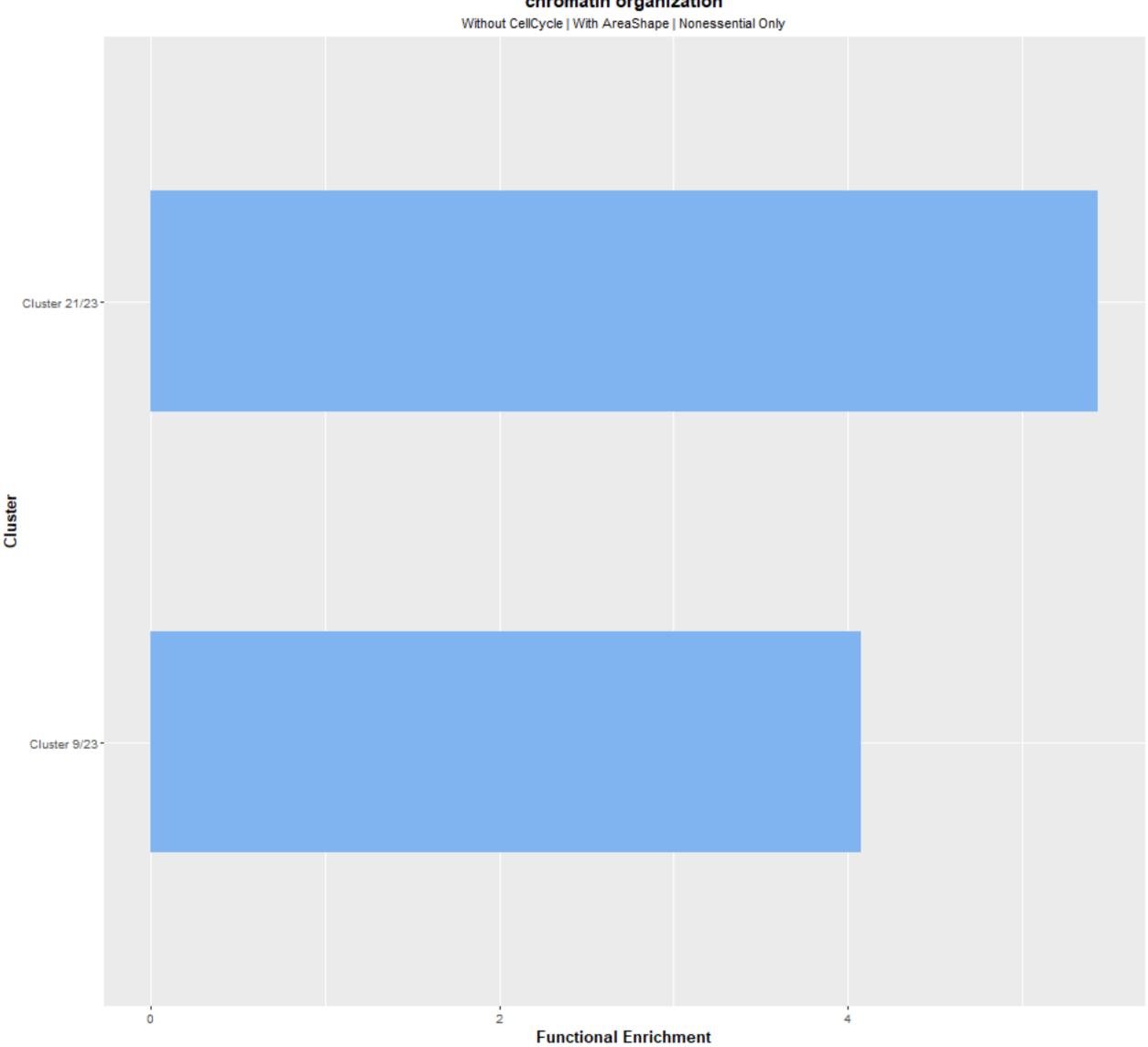
chromatin organization Without CellCycle | With AreaShape | Essential Only Cluster 23/26 2.5 0.5 0.0 1.0 2.0 1.5

Functional Enrichment

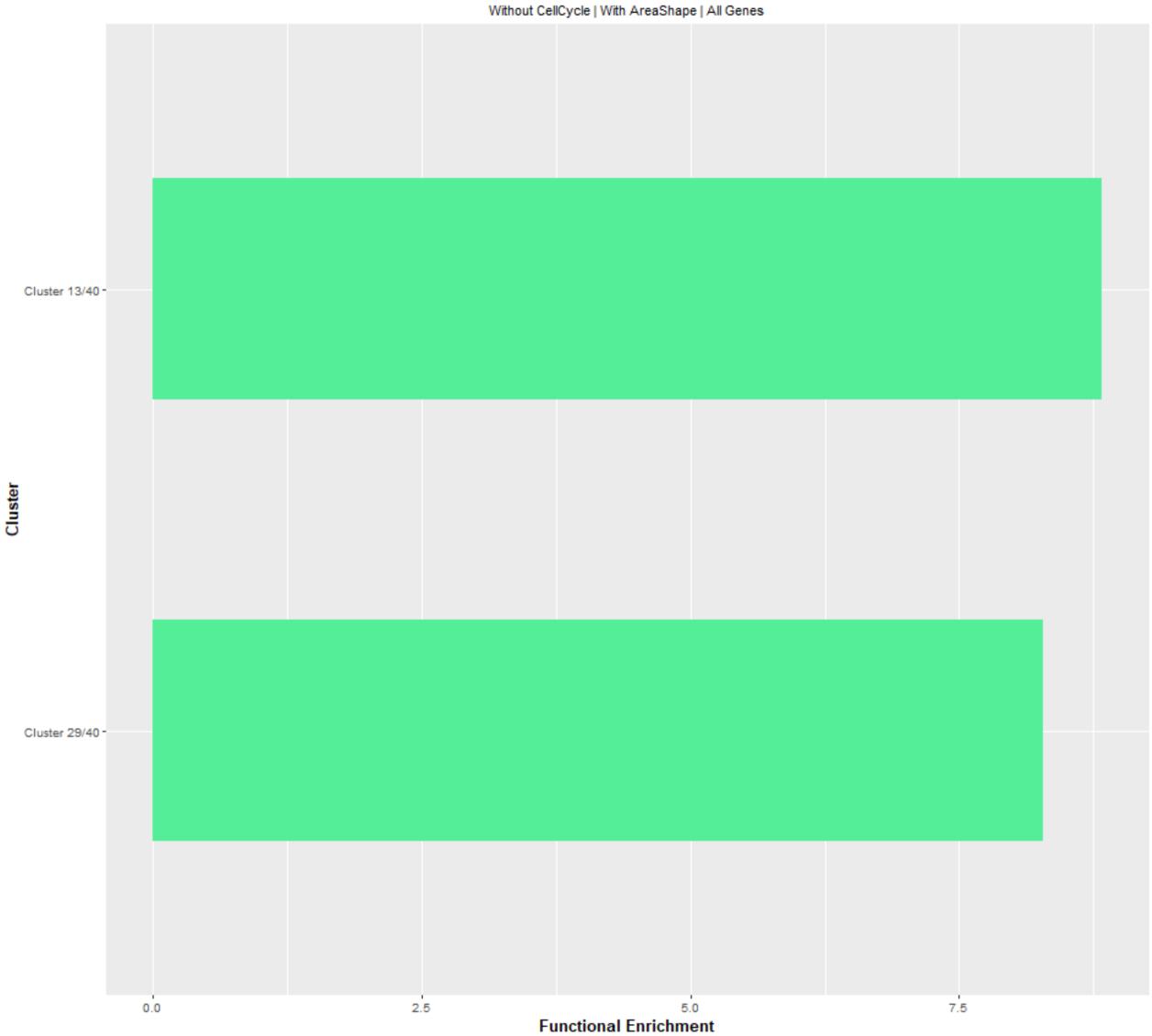
chromatin organization Without CellCycle | With AreaShape | No Vesicle Cluster 29/39 -Cluster 4/39

2

chromatin organization



chromosome segregation Without CellCycle | With AreaShape | All Genes



chromosome segregation Without CellCycle | With AreaShape | Essential Only Cluster 23/26 12 **Functional Enrichment**

chromosome segregation Without CellCycle | With AreaShape | No Vesicle Cluster 28/39 -Cluster Cluster 4/39 -2 6 **Functional Enrichment**

chromosome segregation Without CellCycle | With AreaShape | Nonessential Only Cluster 21/23 6 **Functional Enrichment**

cofactor metabolic process Without CellCycle | With AreaShape | All Genes Cluster 20/40 ż **Functional Enrichment**

cofactor metabolic process Without CellCycle | With AreaShape | No Vesicle Cluster 19/39 ż **Functional Enrichment**

cofactor metabolic process Without CellCycle | With AreaShape | Nonessential Only Cluster 19/23 3 **Functional Enrichment**

cytokinesis Without CellCycle | With AreaShape | All Genes Cluster 23/40 -Cluster Cluster 14/40 -3 **Functional Enrichment**

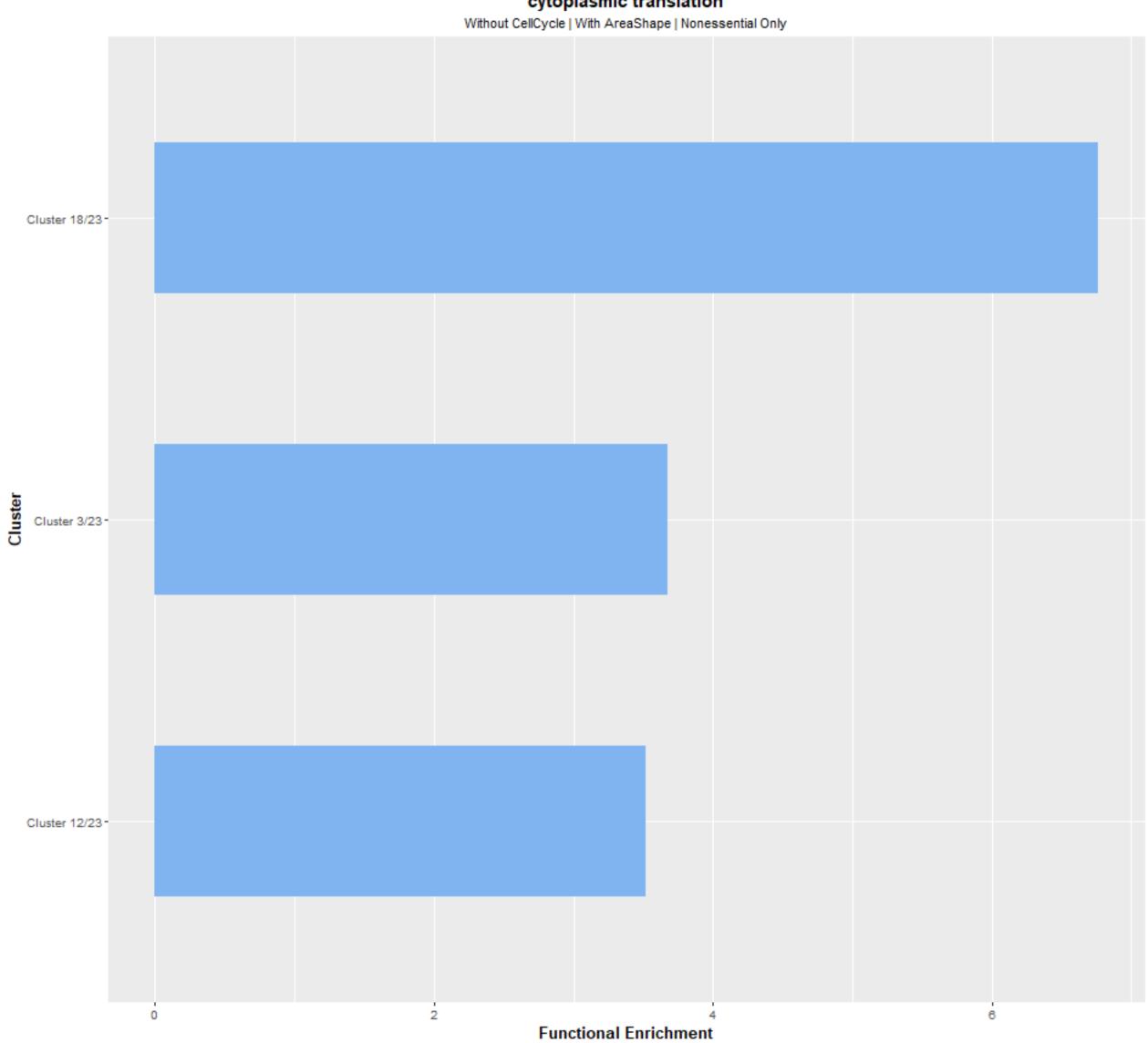
cytokinesis Without CellCycle | With AreaShape | Essential Only Cluster 25/26 3 Functional Enrichment

cytokinesis Without CellCycle | With AreaShape | No Vesicle Cluster 22/39 -Cluster 4/39 3 **Functional Enrichment**

cytoplasmic translation Without CellCycle | With AreaShape | All Genes Cluster 34/40 -Cluster 22/40 -6 **Functional Enrichment**

cytoplasmic translation Without CellCycle | With AreaShape | No Vesicle Cluster 33/39 -Cluster 21/39 6 **Functional Enrichment**

cytoplasmic translation



cytoskeleton organization Without CellCycle | With AreaShape | All Genes Cluster 13/40 -Cluster 30/40 -Cluster 33/40 -Cluster 14/40 -2 **Functional Enrichment**

cytoskeleton organization Without CellCycle | With AreaShape | Essential Only Cluster 23/26 Cluster 25/26 -2 **Functional Enrichment**

cytoskeleton organization Without CellCycle | With AreaShape | No Vesicle Cluster 4/39 Cluster 29/39 Cluster 32/39 3 **Functional Enrichment**

cytoskeleton organization Without CellCycle | With AreaShape | Nonessential Only Cluster 16/23 **Functional Enrichment**

DNA recombination Without CellCycle | With AreaShape | All Genes Cluster 29/40 -Cluster Cluster 13/40 -

5.0

Functional Enrichment

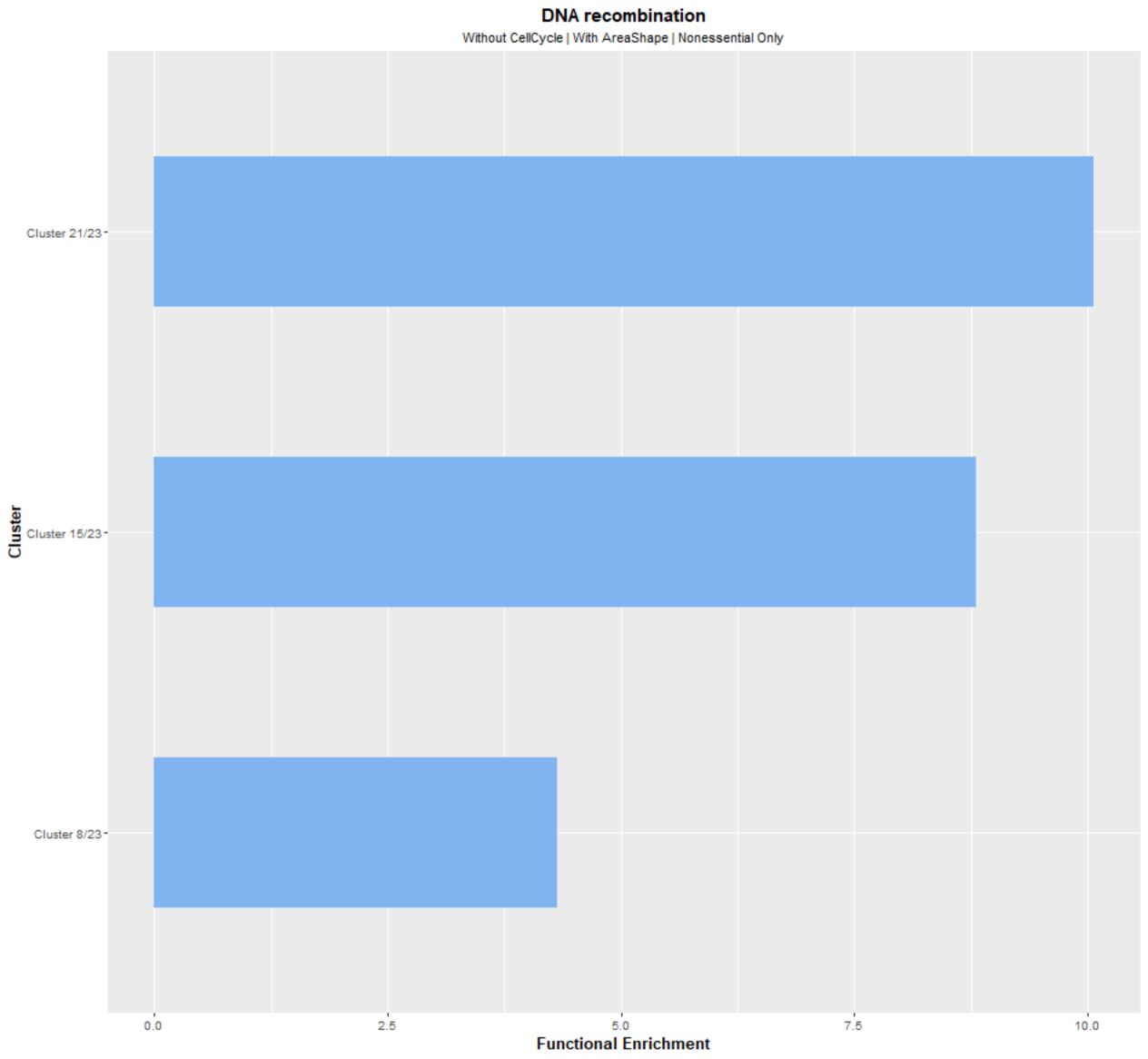
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2.5

0.0

DNA recombination Without CellCycle | With AreaShape | Essential Only Cluster 23/26

DNA recombination Without CellCycle | With AreaShape | No Vesicle Cluster 28/39 Cluster Cluster 4/39 2.5 5.0 7.5 0.0 **Functional Enrichment**

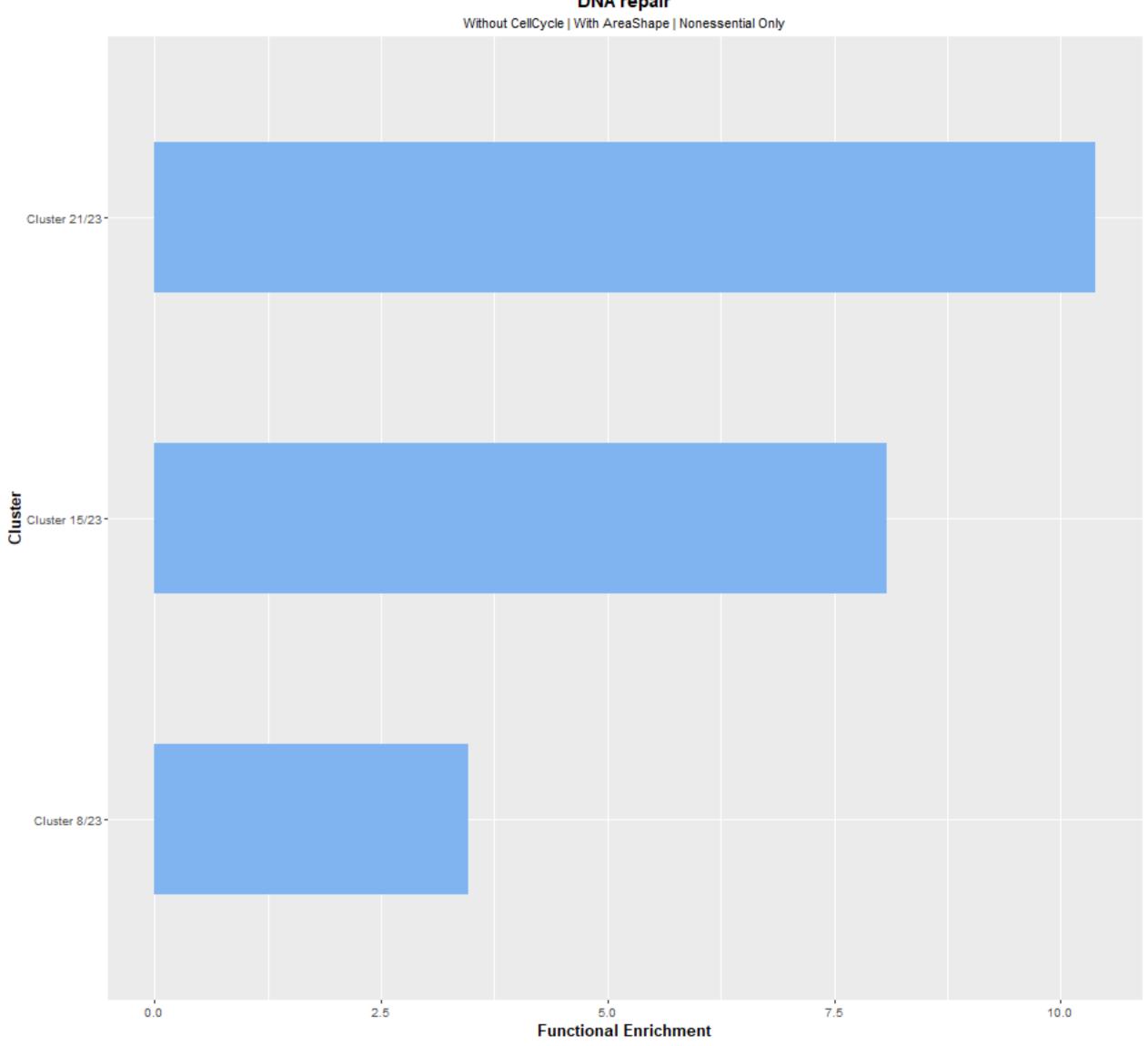


DNA repair Without CellCycle | With AreaShape | All Genes Cluster 29/40 -Cluster Cluster 13/40 -2.5 5.0 7.5 0.0 **Functional Enrichment**

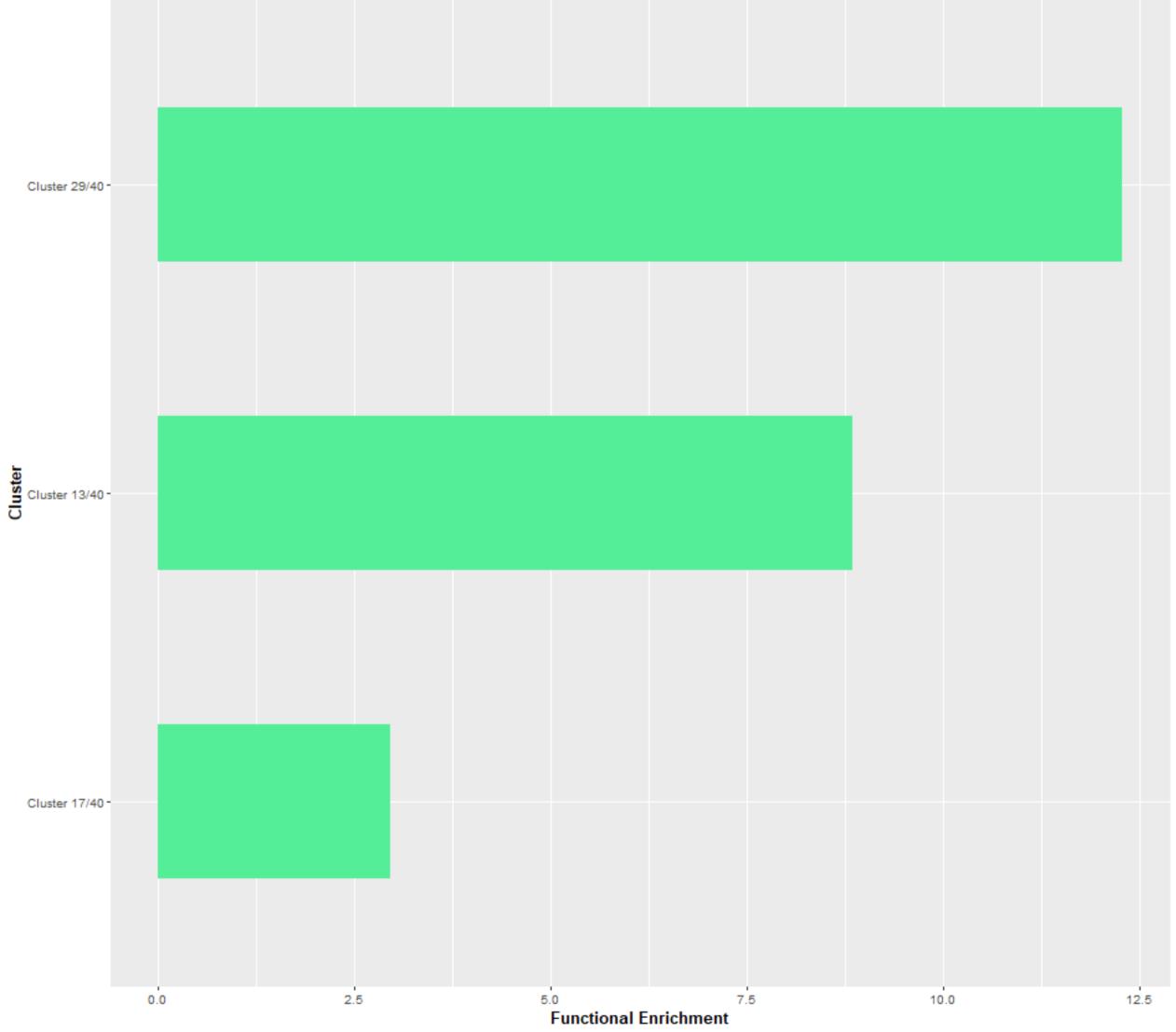
DNA repair Without CellCycle | With AreaShape | Essential Only Cluster 23/26 2 **Functional Enrichment**

DNA repair Without CellCycle | With AreaShape | No Vesicle Cluster 28/39 -Cluster Cluster 4/39 2.5 5.0 7.5 0.0 **Functional Enrichment**

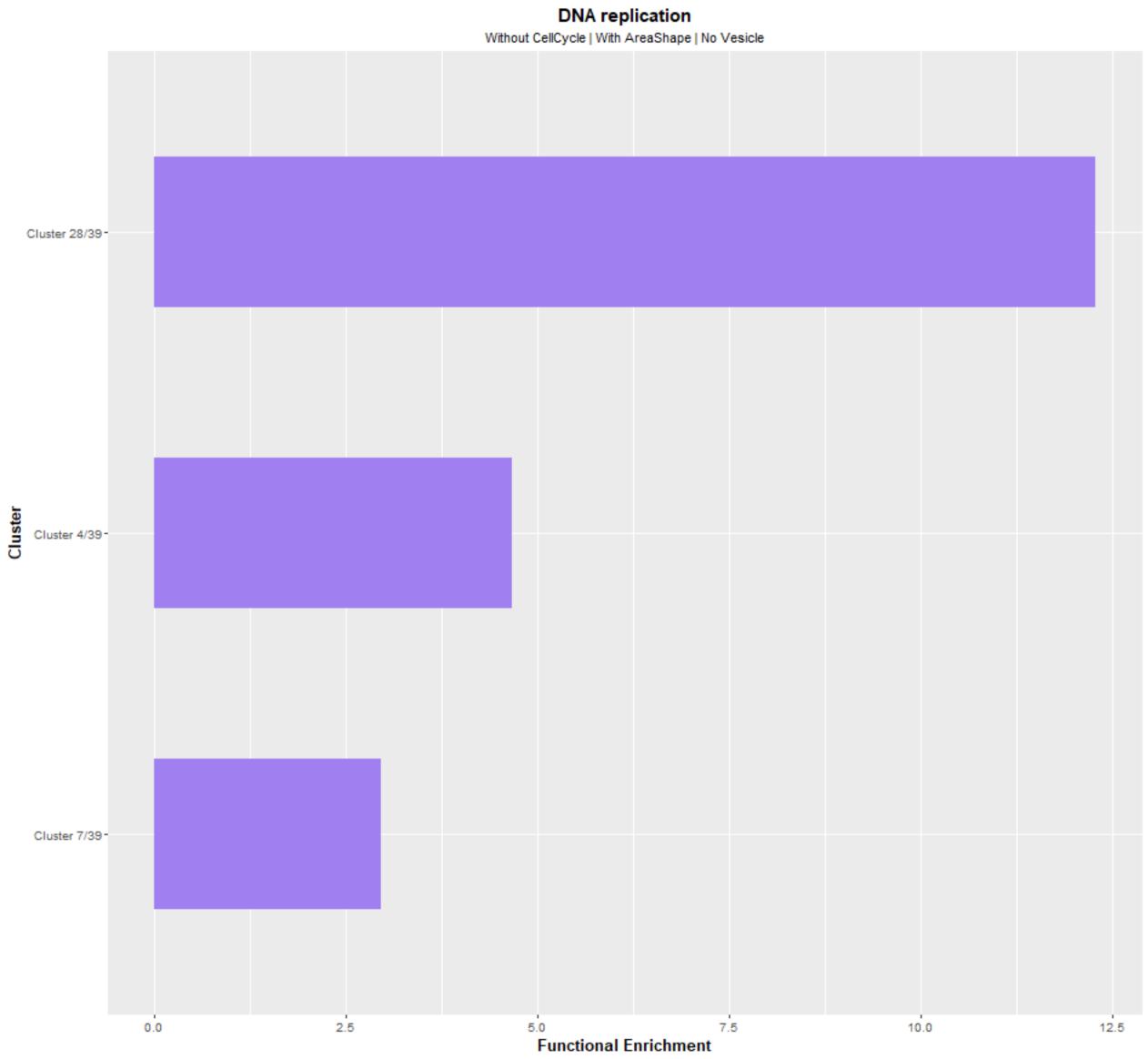
DNA repair

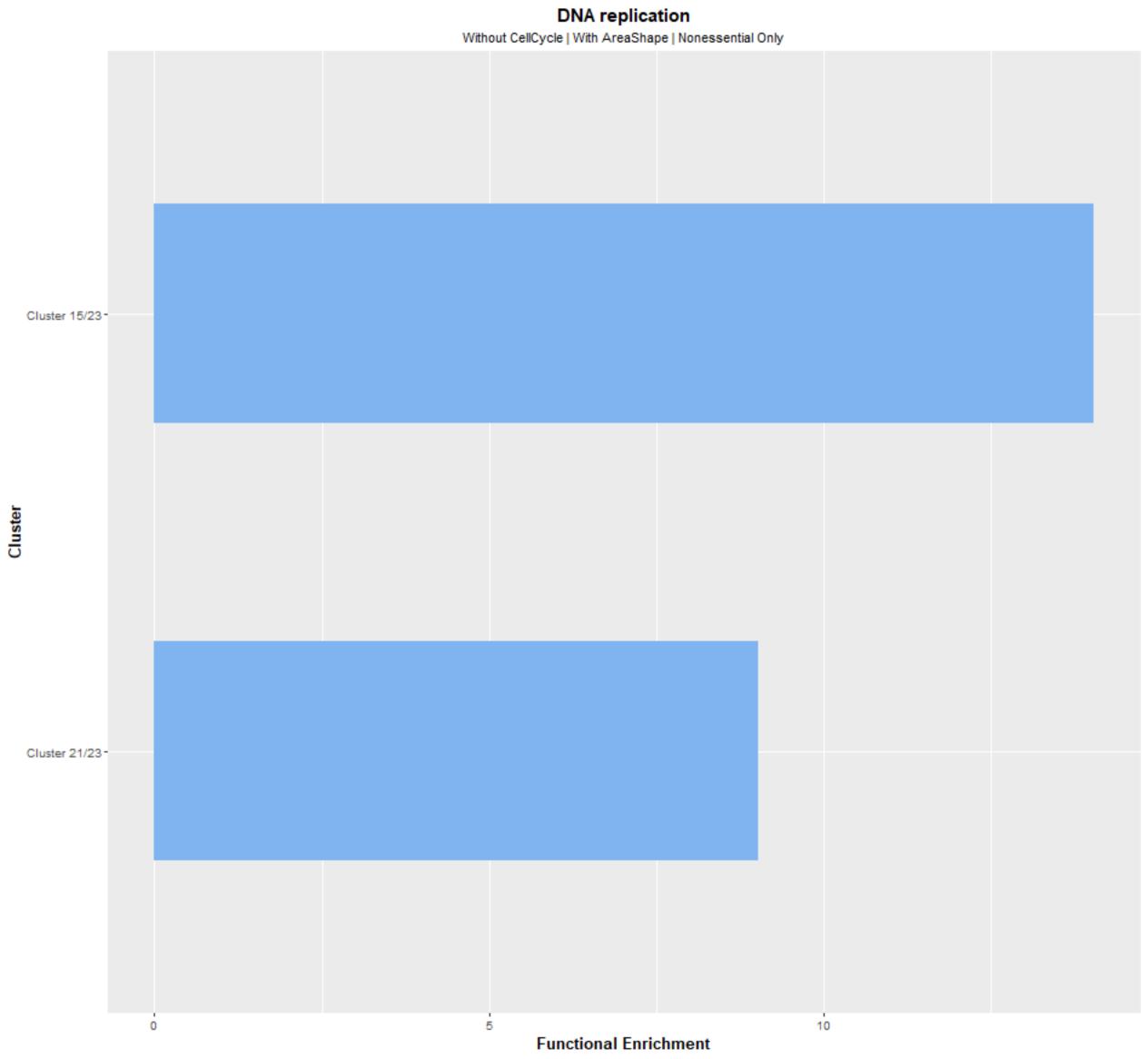


DNA replicationWithout CellCycle | With AreaShape | All Genes Cluster 29/40 -



DNA replication Without CellCycle | With AreaShape | Essential Only Cluster 23/26 Cluster Cluster 20/26 -10 **Functional Enrichment**





DNA-templated transcription, elongation Without CellCycle | With AreaShape | All Genes Cluster 6/40 -Cluster 11/40 -5 10 **Functional Enrichment**

DNA-templated transcription, elongation Without CellCycle | With AreaShape | Essential Only Cluster 10/26 -Cluster 20/26 -5 10 **Functional Enrichment**

DNA-templated transcription, elongation Without CellCycle | With AreaShape | No Vesicle Cluster 14/39 -Cluster 3/39 Cluster 4/39 5 10 **Functional Enrichment**

DNA-templated transcription, initiation Without CellCycle | With AreaShape | All Genes Cluster 6/40 -Cluster 11/40 -Cluster 14/40 -Cluster 13/40 -10 20 **Functional Enrichment**

DNA-templated transcription, initiation Without CellCycle | With AreaShape | Essential Only Cluster 10/26 -Cluster 20/26 -Cluster 25/26 -Cluster 23/26 10 20 **Functional Enrichment**

DNA-templated transcription, initiation Without CellCycle | With AreaShape | No Vesicle Cluster 14/39 -Cluster 3/39 Cluster 4/39 10 20 **Functional Enrichment**

DNA-templated transcription, termination Without CellCycle | With AreaShape | All Genes Cluster 7/40 -0.0 5.0 7.5 2.5 10.0 **Functional Enrichment**

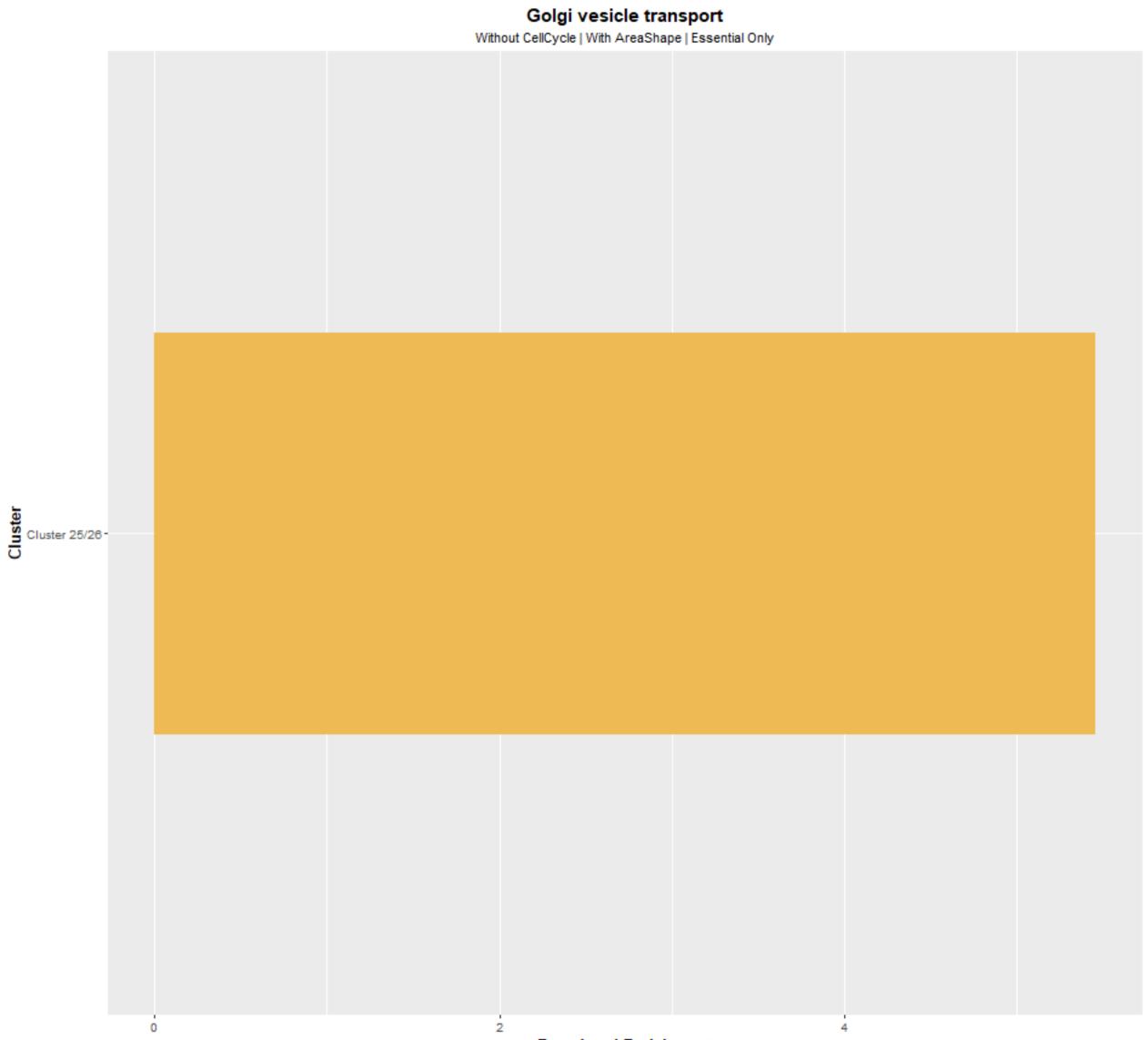
DNA-templated transcription, termination Without CellCycle | With AreaShape | Essential Only Cluster 19/26 -Cluster 25/26 -2.5 7.5 5.0 0.0 10.0 **Functional Enrichment**

DNA-templated transcription, termination Without CellCycle | With AreaShape | No Vesicle Cluster 15/39 -Cluster 4/39 2.5 5.0 7.5 0.0 10.0 **Functional Enrichment**

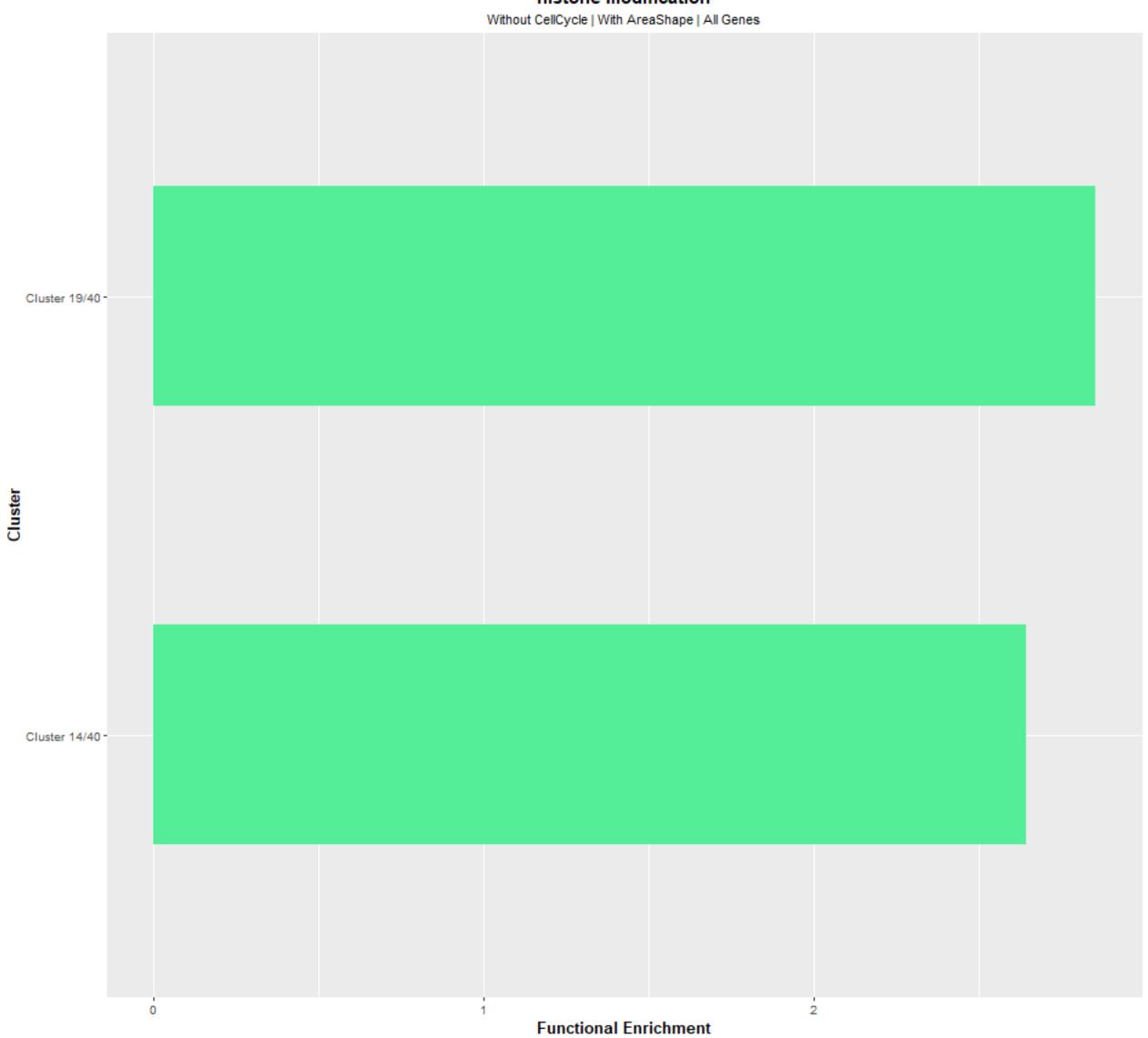
exocytosis Without CellCycle | With AreaShape | All Genes Cluster 14/40 -**Functional Enrichment**

exocytosis Without CellCycle | With AreaShape | Essential Only Cluster 25/26 2 **Functional Enrichment**

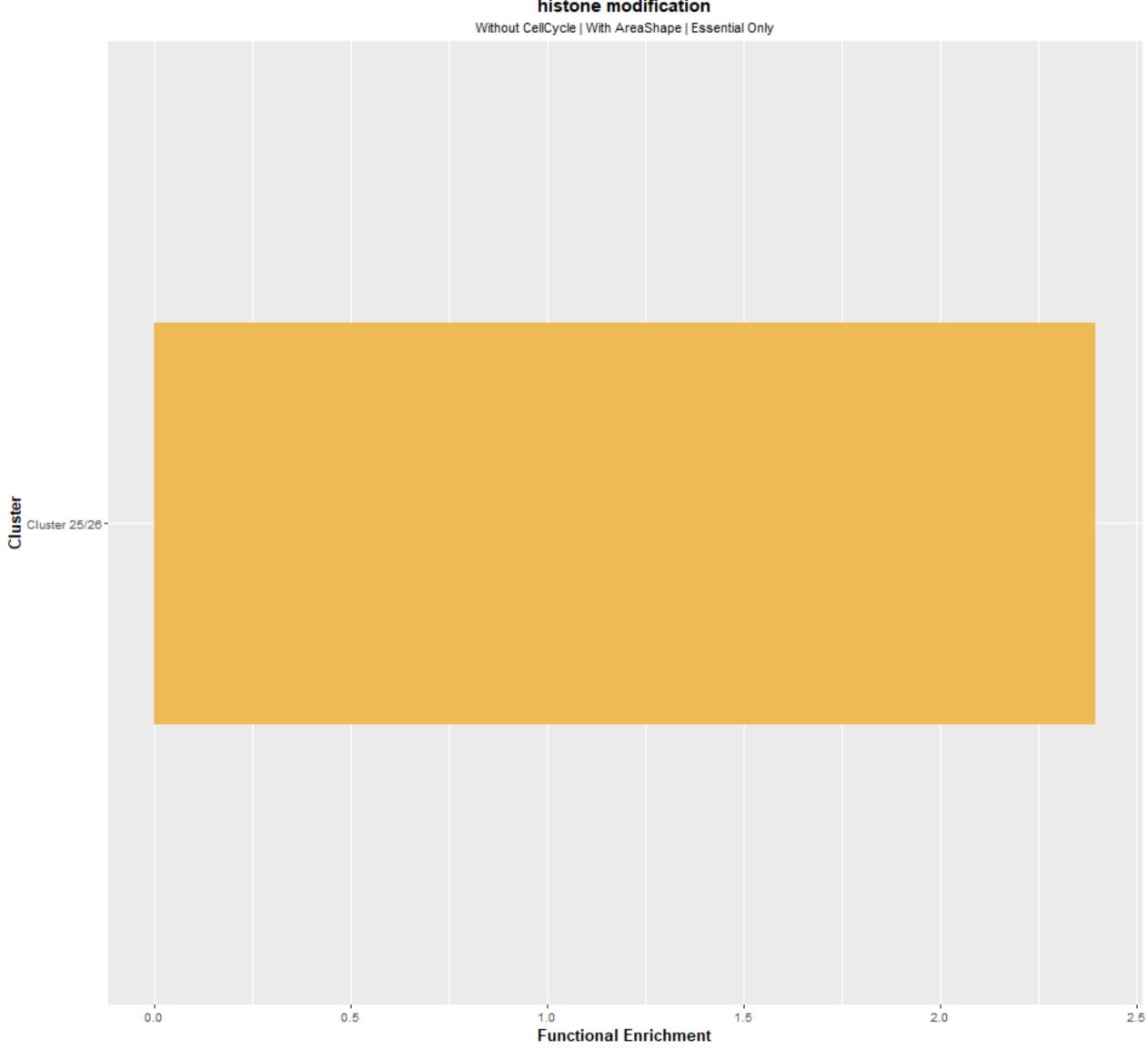
Golgi vesicle transport Without CellCycle | With AreaShape | All Genes Cluster 14/40 -2



histone modification



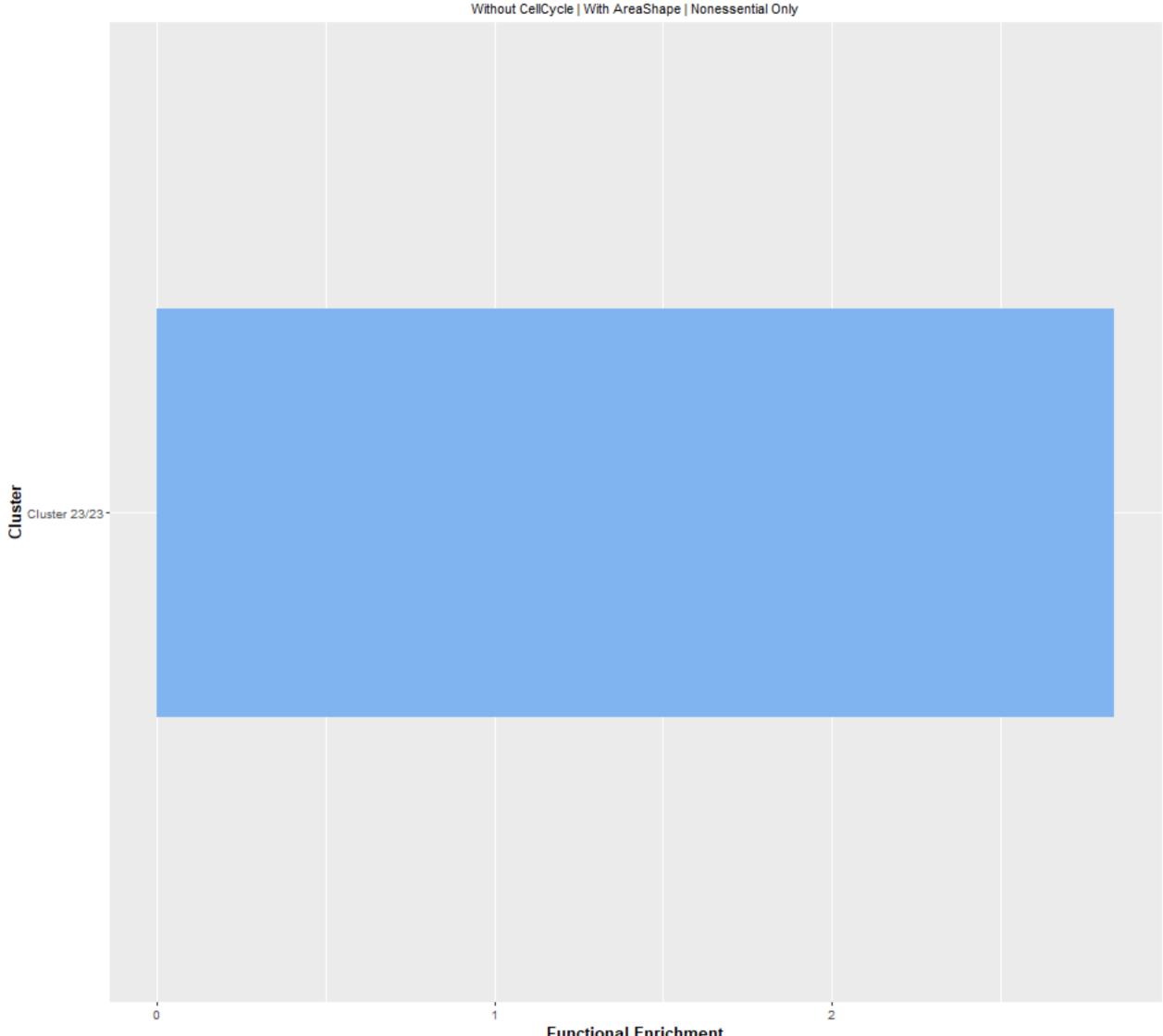
histone modification



histone modification Without CellCycle | With AreaShape | No Vesicle Cluster 18/39 -Cluster Cluster 4/39 2 **Functional Enrichment**

histone modification

Without CellCycle | With AreaShape | Nonessential Only



invasive growth in response to glucose limitation Without CellCycle | With AreaShape | All Genes Cluster 30/40 -2.5 7.5 10.0 0.0 5.0 **Functional Enrichment**

invasive growth in response to glucose limitation Without CellCycle | With AreaShape | No Vesicle Cluster 29/39 2.5 7.5 10.0 0.0 5.0 **Functional Enrichment**

invasive growth in response to glucose limitation Without CellCycle | With AreaShape | Nonessential Only Cluster 9/23 2.5 7.5 0.0 5.0 10.0 **Functional Enrichment**

ion transport Without CellCycle | With AreaShape | All Genes Cluster 20/40 -2 **Functional Enrichment**

ion transport Without CellCycle | With AreaShape | No Vesicle Cluster 19/39 2 **Functional Enrichment**

ion transport Without CellCycle | With AreaShape | Nonessential Only Cluster 19/23 2 **Functional Enrichment**

lipid metabolic process Without CellCycle | With AreaShape | All Genes Cluster 36/40 -Cluster 14/40 -2 **Functional Enrichment**

lipid metabolic process Without CellCycle | With AreaShape | Essential Only Cluster 25/26 0.5 2.0 0.0 1.0 1.5 2.5 Functional Enrichment

lipid metabolic process Without CellCycle | With AreaShape | No Vesicle Cluster 35/39 -Cluster 4/39 2 **Functional Enrichment**

lipid metabolic process Without CellCycle | With AreaShape | Nonessential Only Cluster 22/23 Cluster 6/23 -3 **Functional Enrichment**

meiotic cell cycle Without CellCycle | With AreaShape | Essential Only Cluster 23/26 1.0 Functional Enrichment 0.5 2.5 0.0 2.0 1.5

membrane fusion Without CellCycle | With AreaShape | All Genes Cluster 14/40 -2 **Functional Enrichment**

membrane fusion Without CellCycle | With AreaShape | Essential Only

mitochondrial translation Without CellCycle | With AreaShape | All Genes Cluster 20/40 -2 **Functional Enrichment**

mitochondrial translation Without CellCycle | With AreaShape | No Vesicle Cluster 19/39 2 **Functional Enrichment**

mitochondrial translation Without CellCycle | With AreaShape | Nonessential Only Cluster 19/23 2 **Functional Enrichment**

mitochondrion organization Without CellCycle | With AreaShape | All Genes Cluster 20/40 -3 **Functional Enrichment**

mitochondrion organization Without CellCycle | With AreaShape | No Vesicle Cluster 19/39 3 **Functional Enrichment**

mitochondrion organization Without CellCycle | With AreaShape | Nonessential Only Cluster 19/23 3 Functional Enrichment

mitotic cell cycle Without CellCycle | With AreaShape | All Genes Cluster 29/40 -Cluster Cluster 13/40 -2 6 **Functional Enrichment**

mitotic cell cycle Without CellCycle | With AreaShape | Essential Only Cluster 23/26 Cluster 25/26 -2 **Functional Enrichment**

mitotic cell cycle Without CellCycle | With AreaShape | No Vesicle Cluster 28/39 -Cluster Cluster 4/39 2 6 **Functional Enrichment**

mitotic cell cycle Without CellCycle | With AreaShape | Nonessential Only Cluster 21/23 -Cluster 16/23 Cluster 12/23

monocarboxylic acid metabolic process Without CellCycle | With AreaShape | Nonessential Only Cluster 5/23 5 **Functional Enrichment**

mRNA processing Without CellCycle | With AreaShape | All Genes Cluster 11/40 -Cluster 7/40 -Cluster Cluster 14/40 -Cluster 13/40 -6 **Functional Enrichment**

mRNA processing Without CellCycle | With AreaShape | Essential Only Cluster 19/26 -Cluster 25/26 Cluster 20/26 -**Functional Enrichment**

mRNA processing Without CellCycle | With AreaShape | No Vesicle Cluster 3/39 -Cluster 15/39 Cluster 4/39 **Functional Enrichment**

nuclear transport Without CellCycle | With AreaShape | All Genes Cluster 11/40 -Cluster 23/40 -Cluster 14/40 -3 **Functional Enrichment**

nuclear transport Without CellCycle | With AreaShape | Essential Only Cluster 20/26 -Cluster 25/26 -**Functional Enrichment**

nuclear transport Without CellCycle | With AreaShape | No Vesicle Cluster 3/39 -Cluster 22/39 Cluster 4/39 3 **Functional Enrichment**

nuclear transport Without CellCycle | With AreaShape | Nonessential Only Cluster 13/23 2 **Functional Enrichment**

nucleobase-containing compound transport Without CellCycle | With AreaShape | All Genes Cluster 14/40 -Cluster 27/40 -2 **Functional Enrichment**

nucleobase-containing compound transport Without CellCycle | With AreaShape | Essential Only Cluster 25/26 0.5 0.0 2.0 1.0 1.5 2.5 Functional Enrichment

nucleobase-containing compound transport Without CellCycle | With AreaShape | No Vesicle Cluster 26/39 -Cluster 4/39 2 **Functional Enrichment**

nucleobase-containing small molecule metabolic process Without CellCycle | With AreaShape | All Genes Cluster 20/40 -3 **Functional Enrichment**

nucleobase-containing small molecule metabolic process Without CellCycle | With AreaShape | No Vesicle Cluster 19/39 3 **Functional Enrichment**

nucleobase-containing small molecule metabolic process Without CellCycle | With AreaShape | Nonessential Only Cluster 19/23 3 **Functional Enrichment**

nucleus organization Without CellCycle | With AreaShape | No Vesicle Cluster 4/39 2 ó **Functional Enrichment**

organelle assembly Without CellCycle | With AreaShape | All Genes Cluster 8/40 ó 9 **Functional Enrichment**

organelle assembly
Without CellCycle | With AreaShape | Essential Only Cluster 8/26 ó **Functional Enrichment**

organelle assembly Without CellCycle | With AreaShape | No Vesicle Cluster 16/39 3 9 **Functional Enrichment**

organelle fission Without CellCycle | With AreaShape | All Genes Cluster 29/40 -Cluster 13/40 -

5.0

Functional Enrichment

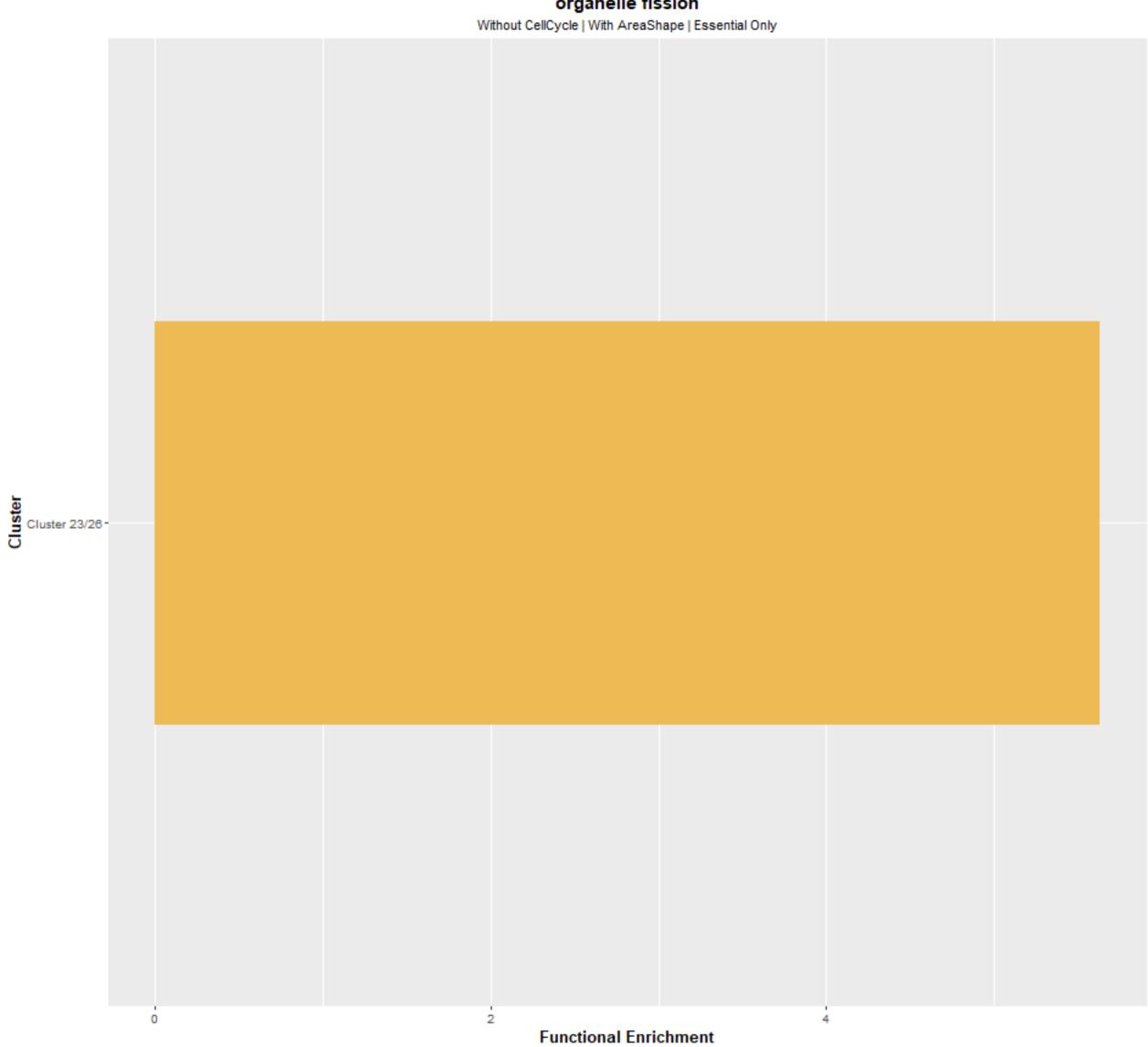
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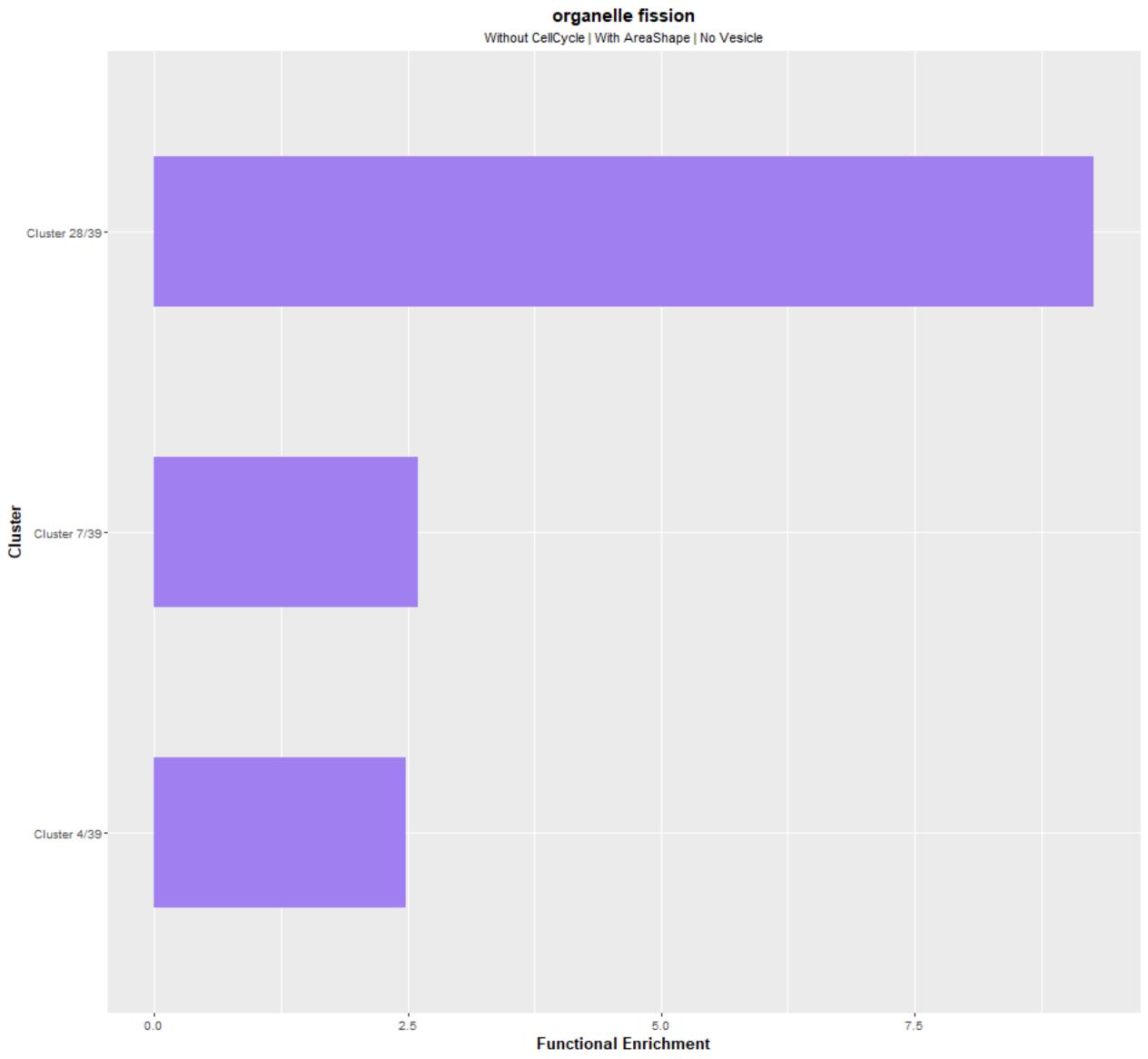
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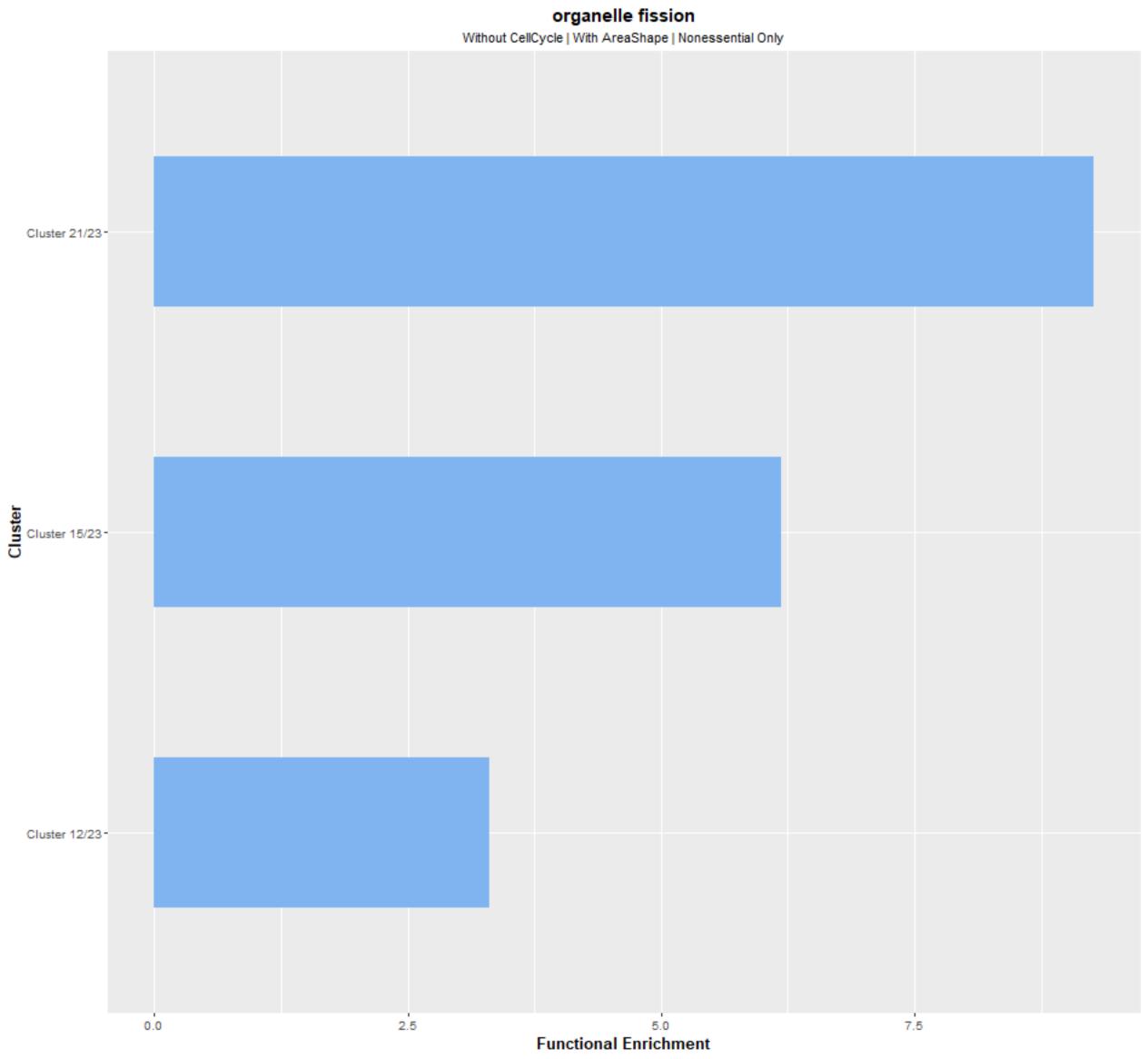
Cluster 17/40 -

0.0

organelle fission







organelle fusion Without CellCycle | With AreaShape | All Genes Cluster 14/40 -2 **Functional Enrichment**

organelle fusion Without CellCycle | With AreaShape | Essential Only Cluster 25/26

organelle inheritance Without CellCycle | With AreaShape | All Genes Cluster 14/40 -**Functional Enrichment**

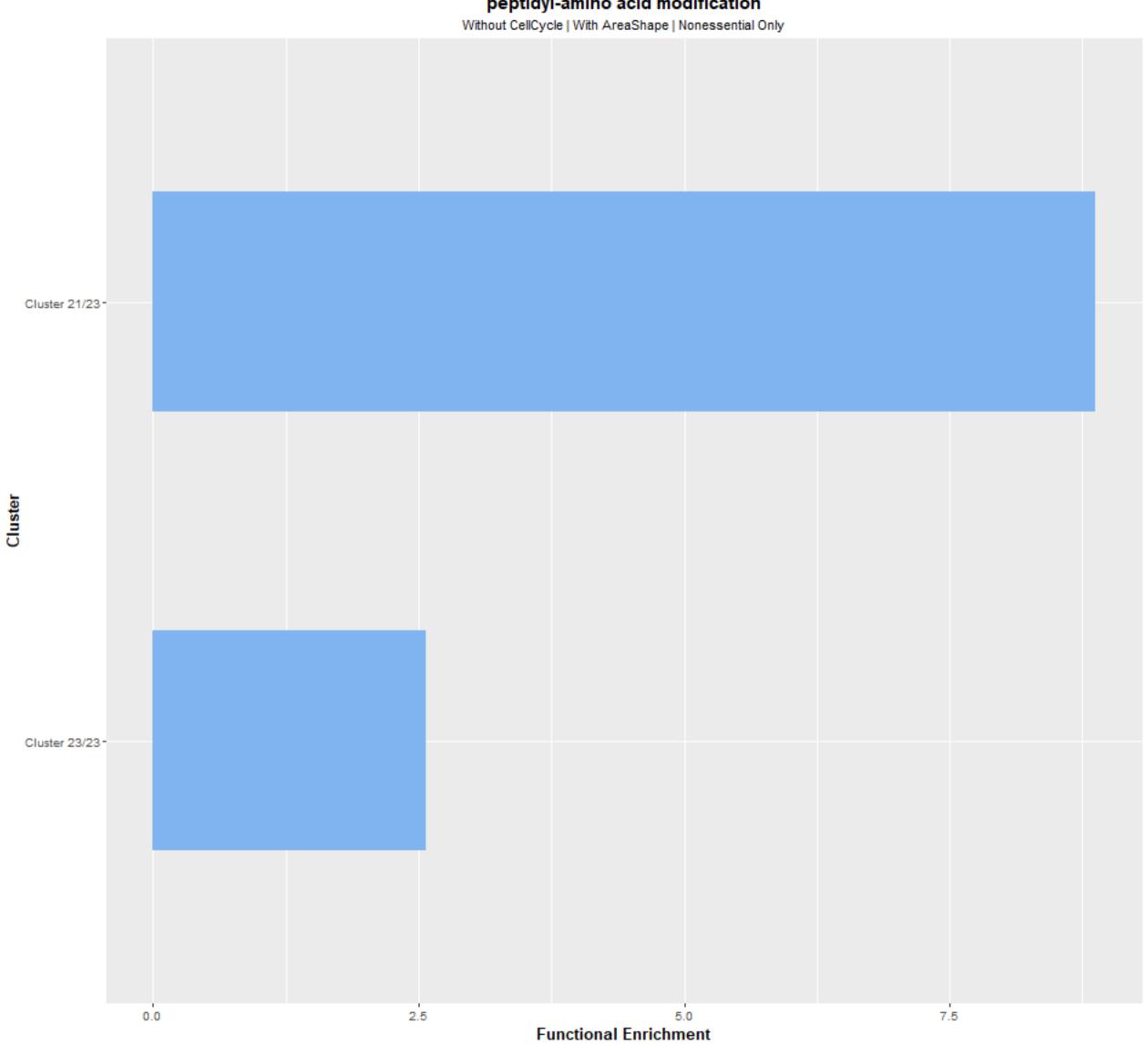
organelle inheritance Without CellCycle | With AreaShape | Essential Only Cluster 25/28 **Functional Enrichment**

peptidyl-amino acid modification Without CellCycle | With AreaShape | All Genes Cluster 14/40 -Cluster Cluster 19/40 -2 **Functional Enrichment**

peptidyl-amino acid modification Without CellCycle | With AreaShape | Essential Only Cluster 25/28 2 **Functional Enrichment**

peptidyl-amino acid modification Without CellCycle | With AreaShape | No Vesicle Cluster 4/39 -Cluster 18/39 -2 **Functional Enrichment**

peptidyl-amino acid modification



protein acylation Without CellCycle | With AreaShape | All Genes Cluster 6/40 -Cluster 22/40 -Cluster 14/40 -10 15 5 20 **Functional Enrichment**

protein acylation Without CellCycle | With AreaShape | Essential Only Cluster 10/26 -Cluster 25/26 -10 15 5 20

Functional Enrichment

protein acylation Without CellCycle | With AreaShape | No Vesicle Cluster 14/39 Cluster 21/39 Cluster 4/39

5

10

15

20

protein acylation Without CellCycle | With AreaShape | Nonessential Only Cluster 21/23 Cluster 3/23 15 10 5 **Functional Enrichment**

protein alkylation Without CellCycle | With AreaShape | All Genes Cluster 19/40 -2 **Functional Enrichment**

protein alkylation Without CellCycle | With AreaShape | No Vesicle Cluster 18/39 2 **Functional Enrichment**

protein alkylationWithout CellCycle | With AreaShape | Nonessential Only Cluster 23/23 **Functional Enrichment**

protein complex biogenesis Without CellCycle | With AreaShape | All Genes Cluster 13/40 -Cluster 14/40 -**Functional Enrichment**

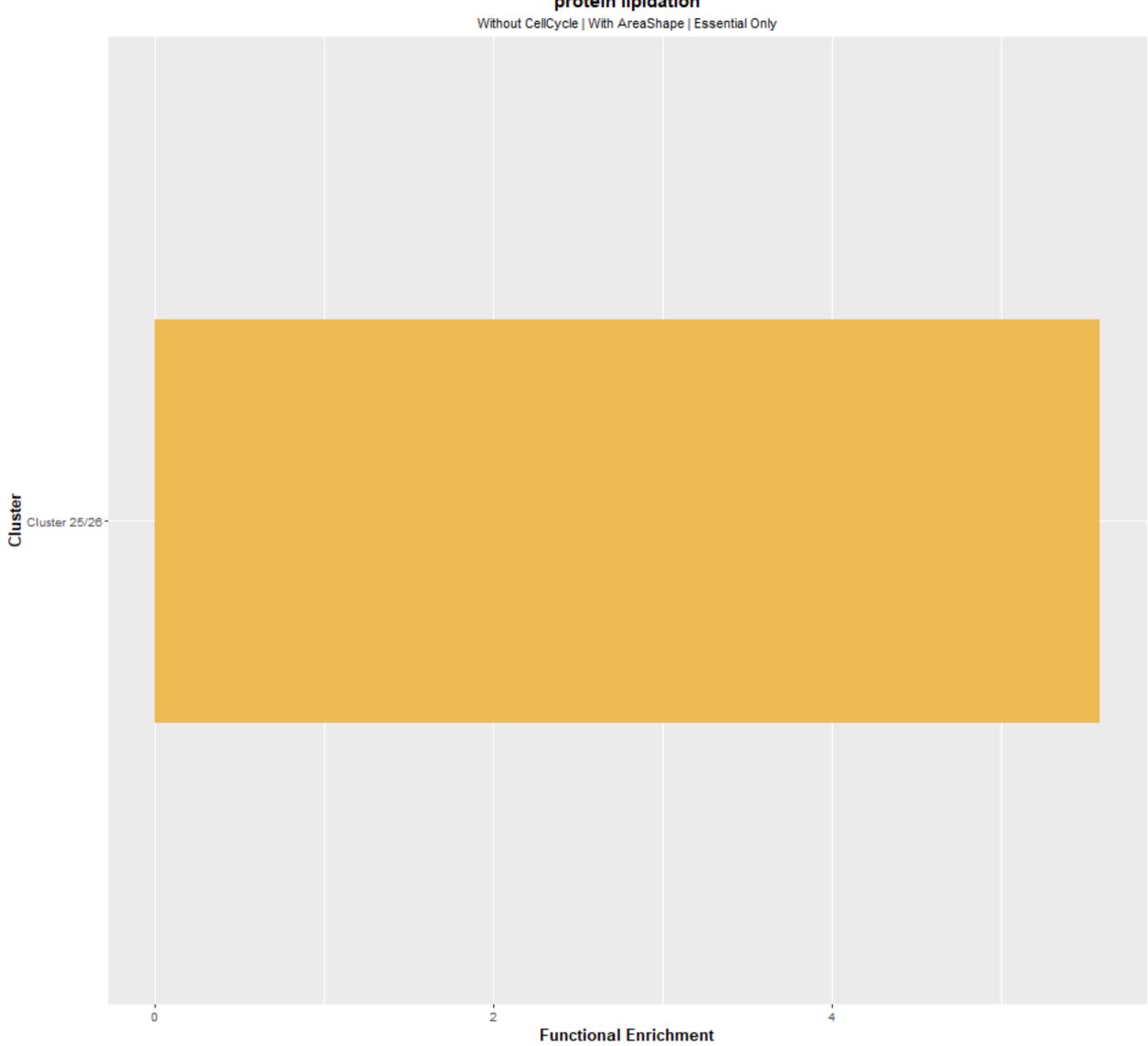
protein complex biogenesis Without CellCycle | With AreaShape | Essential Only Cluster 23/26 -Cluster 25/26 -2 **Functional Enrichment**

protein complex biogenesis Without CellCycle | With AreaShape | No Vesicle Cluster 4/39 ó **Functional Enrichment**

protein dephosphorylation Without CellCycle | With AreaShape | Nonessential Only Cluster 16/23 ź **Functional Enrichment**

protein lipidation Without CellCycle | With AreaShape | All Genes Cluster 14/40 -2 **Functional Enrichment**

protein lipidation



protein lipidation Without CellCycle | With AreaShape | No Vesicle Cluster 4/39 ó **Functional Enrichment**

protein modification by small protein conjugation or removal Without CellCycle | With AreaShape | All Genes Cluster 13/40 -3 Functional Enrichment

protein modification by small protein conjugation or removal Without CellCycle | With AreaShape | Essential Only Cluster 23/26 **Functional Enrichment**

protein modification by small protein conjugation or removal Without CellCycle | With AreaShape | No Vesicle Cluster 4/39 0.5 2.0 0.0 1.5 1.0 **Functional Enrichment**

protein phosphorylationWithout CellCycle | With AreaShape | All Genes Cluster 30/40 -3 **Functional Enrichment**

protein phosphorylation Without CellCycle | With AreaShape | No Vesicle Cluster 29/39 -Cluster 4/39 3 **Functional Enrichment**

protein targeting
Without CellCycle | With AreaShape | Essential Only Cluster 25/26

1.0

Functional Enrichment

1.5

0.5

0.0

proteolysis involved in cellular protein catabolic process Without CellCycle | With AreaShape | All Genes Cluster 13/40 -Cluster 11/40 -**Functional Enrichment**

proteolysis involved in cellular protein catabolic process Without CellCycle | With AreaShape | Essential Only Cluster 23/26 Cluster 20/26 -2 6 **Functional Enrichment**

proteolysis involved in cellular protein catabolic process Without CellCycle | With AreaShape | No Vesicle Cluster 3/39 -Cluster 4/39 -0 3 **Functional Enrichment**

pseudohyphal growth Without CellCycle | With AreaShape | All Genes Cluster 30/40 -2 **Functional Enrichment**

pseudohyphal growth Without CellCycle | With AreaShape | No Vesicle Cluster 29/39 2 **Functional Enrichment**

regulation of cell cycle Without CellCycle | With AreaShape | All Genes Cluster 13/40 -3 Functional Enrichment

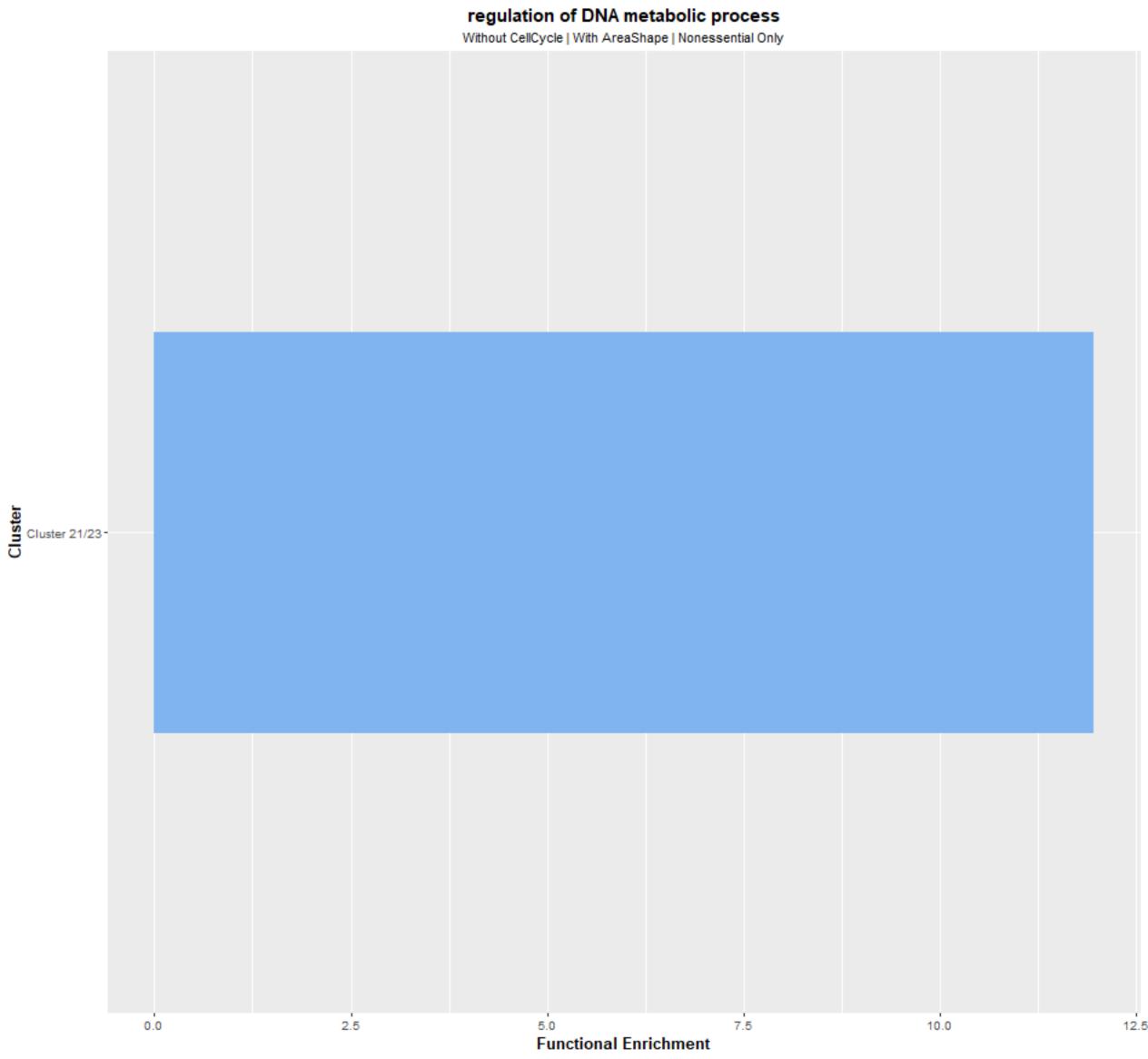
regulation of cell cycle
Without CellCycle | With AreaShape | Essential Only Cluster 23/28 5 Functional Enrichment 3

regulation of cell cycle Without CellCycle | With AreaShape | No Vesicle Cluster 4/39 ó **Functional Enrichment**

regulation of DNA metabolic process Without CellCycle | With AreaShape | All Genes Cluster 29/40 -Cluster 13/40 -2 **Functional Enrichment**

regulation of DNA metabolic process Without CellCycle | With AreaShape | Essential Only Cluster 23/28 2 **Functional Enrichment**

regulation of DNA metabolic process Without CellCycle | With AreaShape | No Vesicle Cluster 28/39 2 **Functional Enrichment**



regulation of organelle organization Without CellCycle | With AreaShape | All Genes Cluster 13/40 -Cluster Cluster 14/40 -3 **Functional Enrichment**

regulation of organelle organization Without CellCycle | With AreaShape | Essential Only Cluster 23/26 Cluster 25/26 -3 Functional Enrichment

regulation of organelle organization Without CellCycle | With AreaShape | No Vesicle Cluster 4/39 ó 2 **Functional Enrichment**

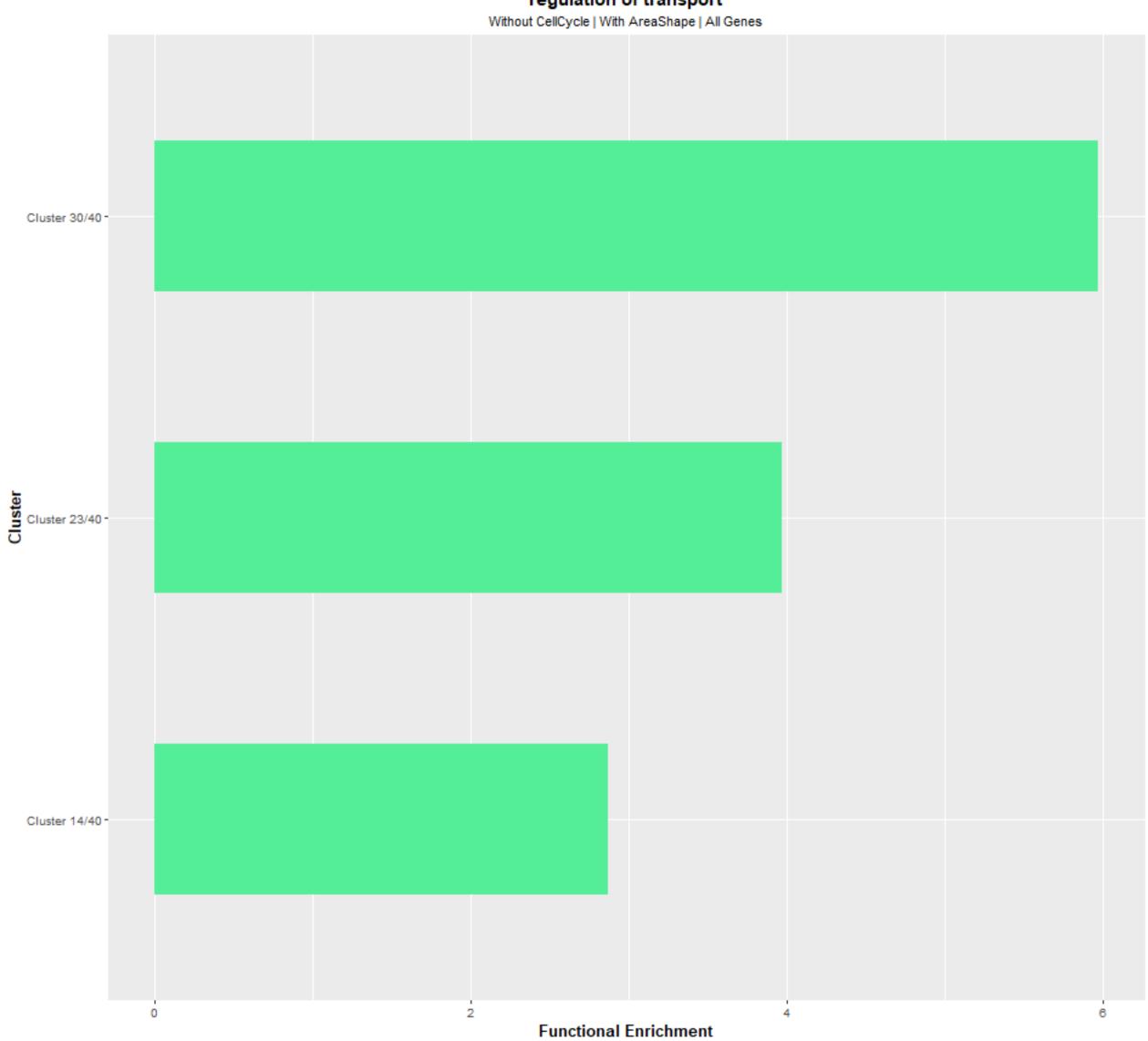
regulation of protein modification process Without CellCycle | With AreaShape | All Genes Cluster 30/40 -Cluster 13/40 -**Functional Enrichment**

regulation of protein modification process Without CellCycle | With AreaShape | No Vesicle Cluster 29/39 Cluster 4/39 **Functional Enrichment**

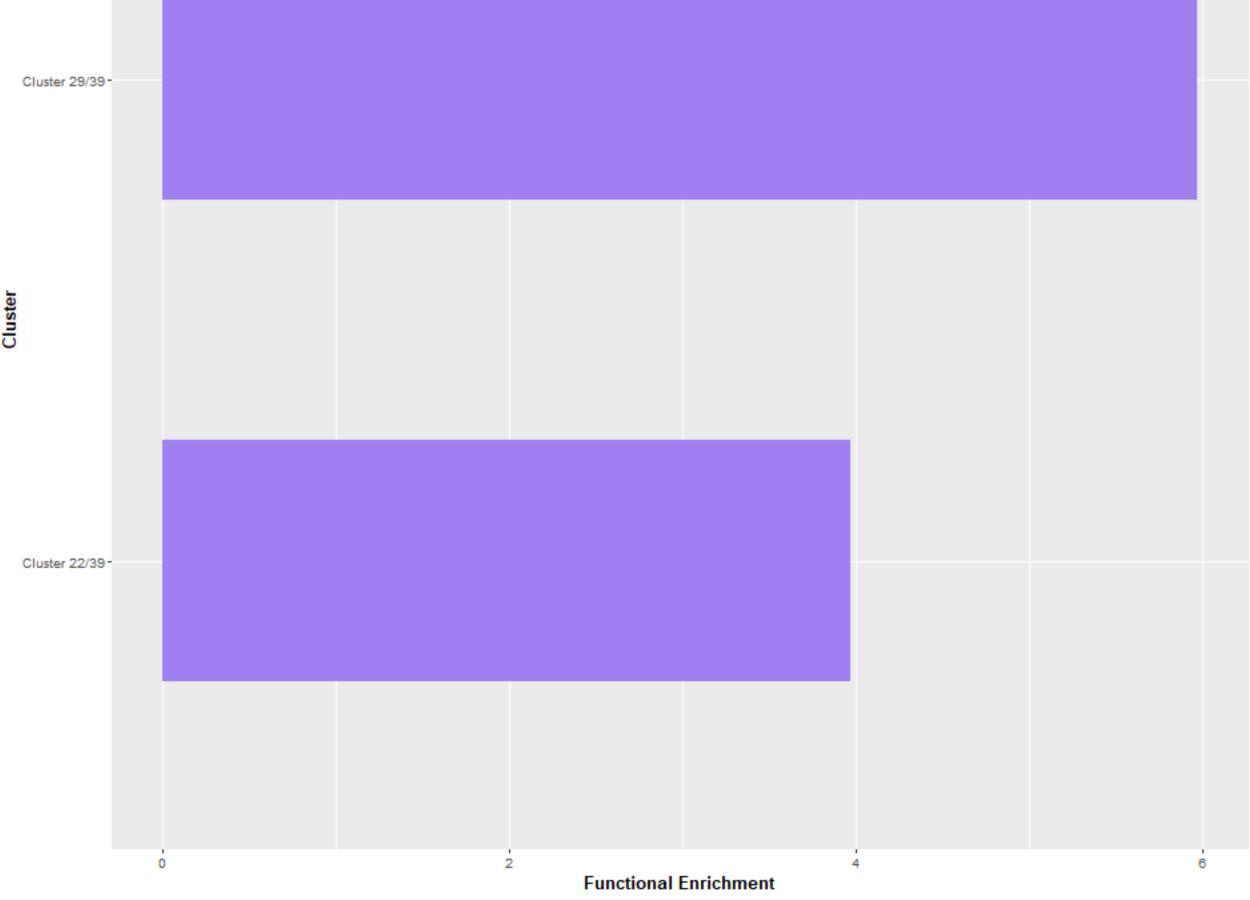
regulation of protein modification process Without CellCycle | With AreaShape | Nonessential Only Cluster 22/23 7.5 0.0 2.5 5.0 **Functional Enrichment**

regulation of translation Without CellCycle | With AreaShape | Nonessential Only Cluster 8/23 ó 2 **Functional Enrichment**

regulation of transport



regulation of transport Without CellCycle | With AreaShape | No Vesicle Cluster 29/39 -Cluster 22/39 -



response to chemical Without CellCycle | With AreaShape | All Genes Cluster 30/40 -2

Functional Enrichment

response to chemical Without CellCycle | With AreaShape | No Vesicle Cluster 29/39 2 **Functional Enrichment**

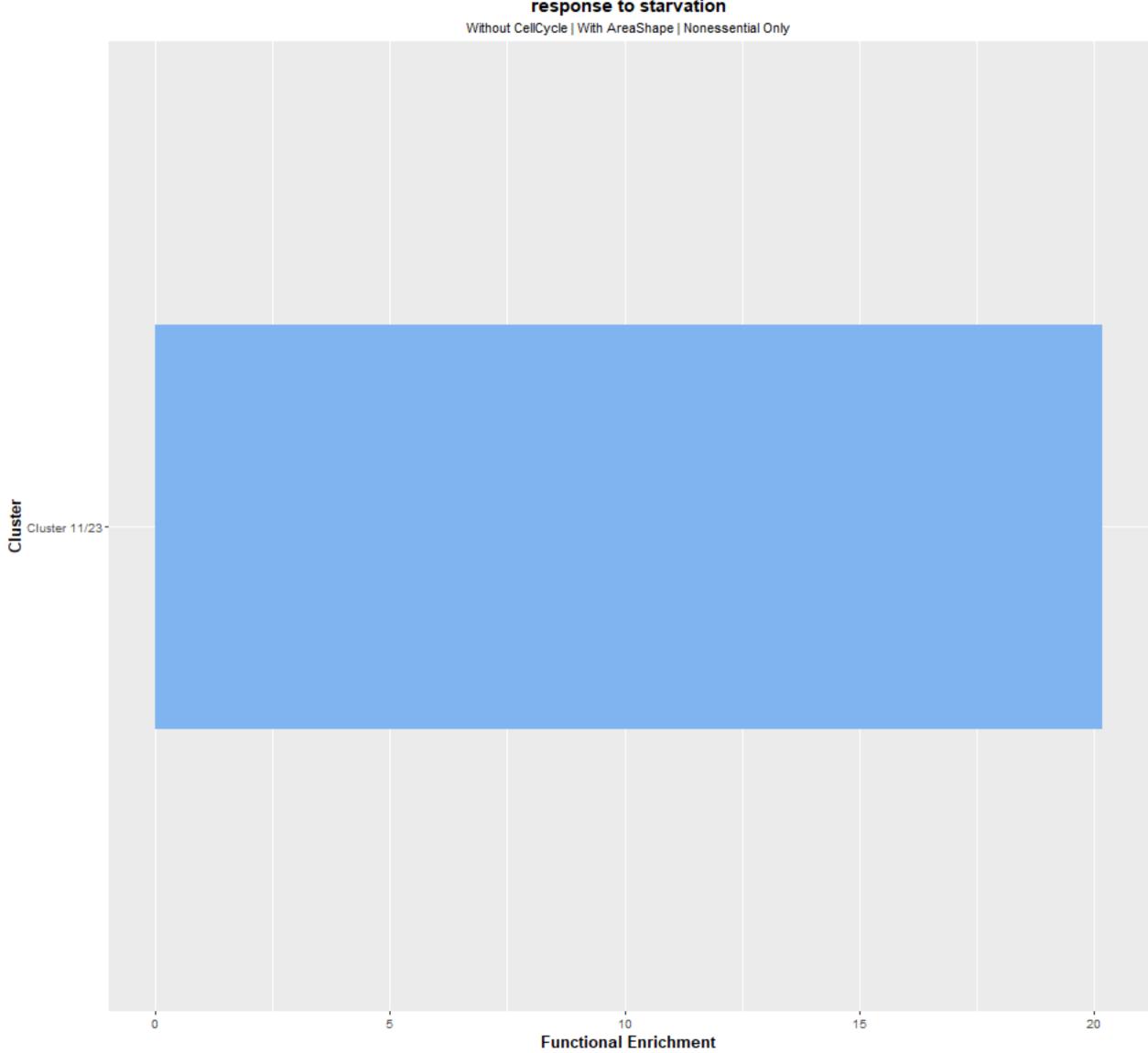
response to chemical Without CellCycle | With AreaShape | Nonessential Only Cluster 22/23 3 Functional Enrichment

response to heat Without CellCycle | With AreaShape | Nonessential Only Cluster 9/23 ó 2 6 **Functional Enrichment**

response to starvation Without CellCycle | With AreaShape | All Genes Cluster 39/40 -15 5 10 **Functional Enrichment**

response to starvation Without CellCycle | With AreaShape | No Vesicle Cluster 38/39 15 5 10 **Functional Enrichment**

response to starvation



ribosomal large subunit biogenesis Without CellCycle | With AreaShape | All Genes Cluster 11/40 -Cluster Cluster 17/40 -2 **Functional Enrichment**

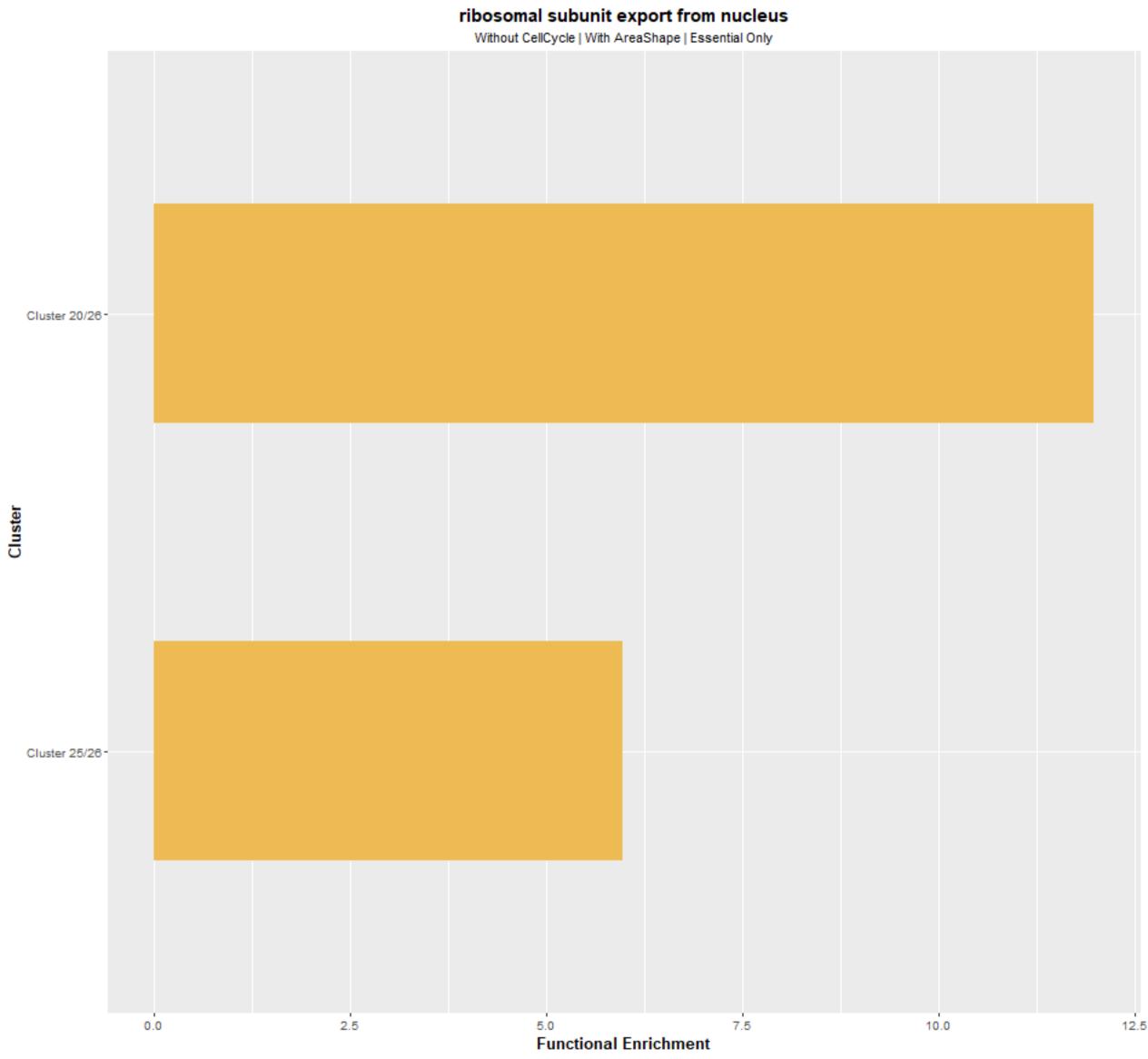
ribosomal large subunit biogenesis Without CellCycle | With AreaShape | Essential Only Cluster 20/26 6 2 **Functional Enrichment**

ribosomal large subunit biogenesis Without CellCycle | With AreaShape | No Vesicle Cluster 3/39 Cluster Cluster 7/39 ż 0 6 **Functional Enrichment**

ribosomal small subunit biogenesis Without CellCycle | With AreaShape | All Genes Cluster 17/40 -3 Functional Enrichment

ribosomal small subunit biogenesis Without CellCycle | With AreaShape | No Vesicle Cluster 7/39 ó 3 Functional Enrichment

ribosomal subunit export from nucleus Without CellCycle | With AreaShape | All Genes Cluster 11/40 -Cluster 14/40 -Cluster 17/40 -8 12 **Functional Enrichment**



ribosomal subunit export from nucleus Without CellCycle | With AreaShape | No Vesicle Cluster 3/39 -Cluster 7/39 Cluster 4/39 12 0 8 **Functional Enrichment**

RNA catabolic process Without CellCycle | With AreaShape | Essential Only Cluster 20/26 **Functional Enrichment**

RNA modification Without CellCycle | With AreaShape | All Genes Cluster 17/40 -3 ż **Functional Enrichment**

RNA modification Without CellCycle | With AreaShape | No Vesicle Cluster 7/39 ó 3 2 **Functional Enrichment**

RNA splicing
Without CellCycle | With AreaShape | All Genes Cluster 7/40 -Cluster 13/40 -Cluster 14/40 -**Functional Enrichment**

RNA splicing Without CellCycle | With AreaShape | Essential Only Cluster 19/26 -Cluster Cluster 25/26 -**Functional Enrichment**

RNA splicing Without CellCycle | With AreaShape | No Vesicle Cluster 15/39 -Cluster Cluster 4/39 **Functional Enrichment**

rRNA processing Without CellCycle | With AreaShape | All Genes Cluster 11/40 -Cluster 7/40 -Cluster 17/40 -2 **Functional Enrichment**

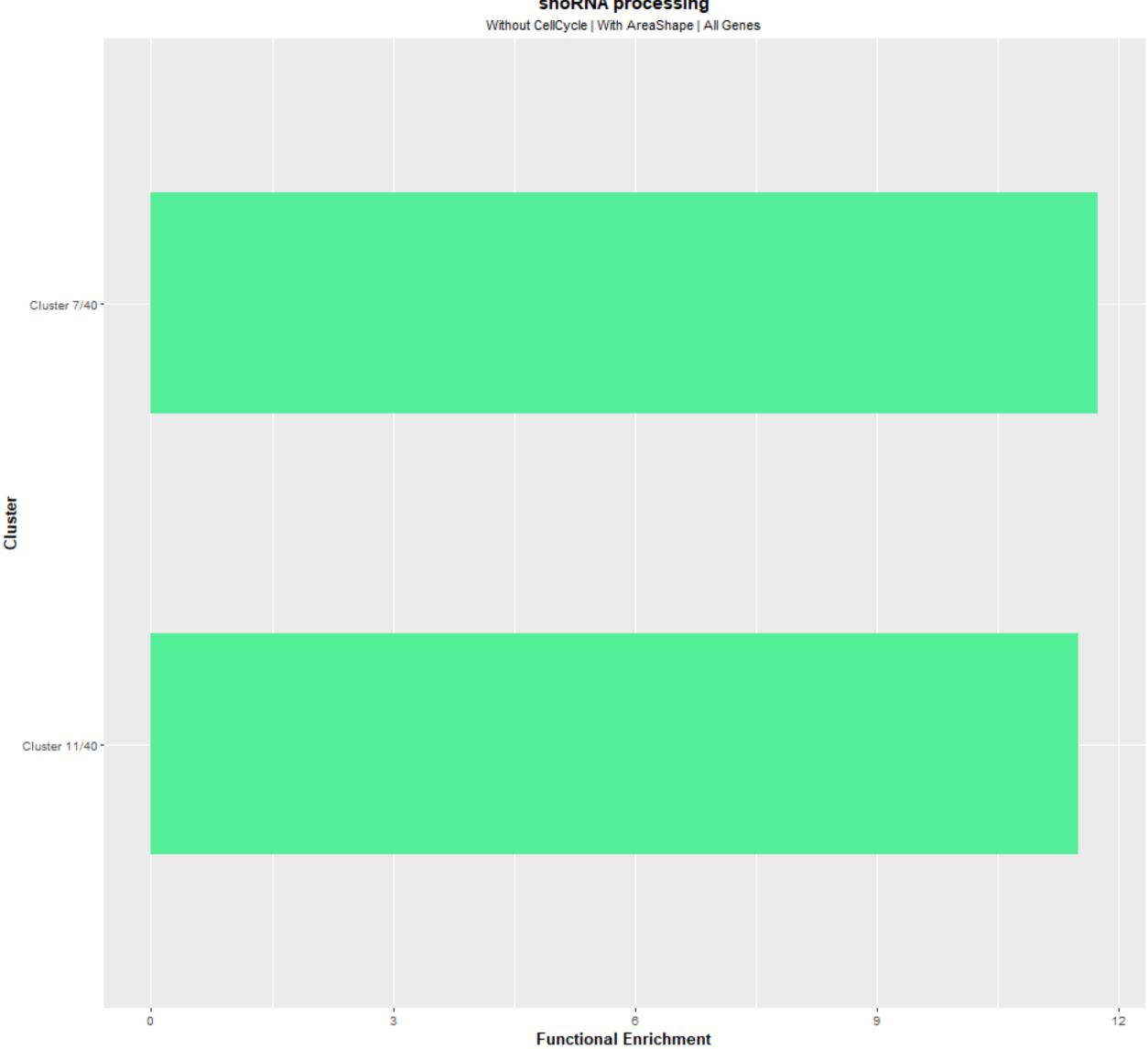
rRNA processing
Without CellCycle | With AreaShape | Essential Only Cluster 20/26 -Cluster 19/26 -2 **Functional Enrichment**

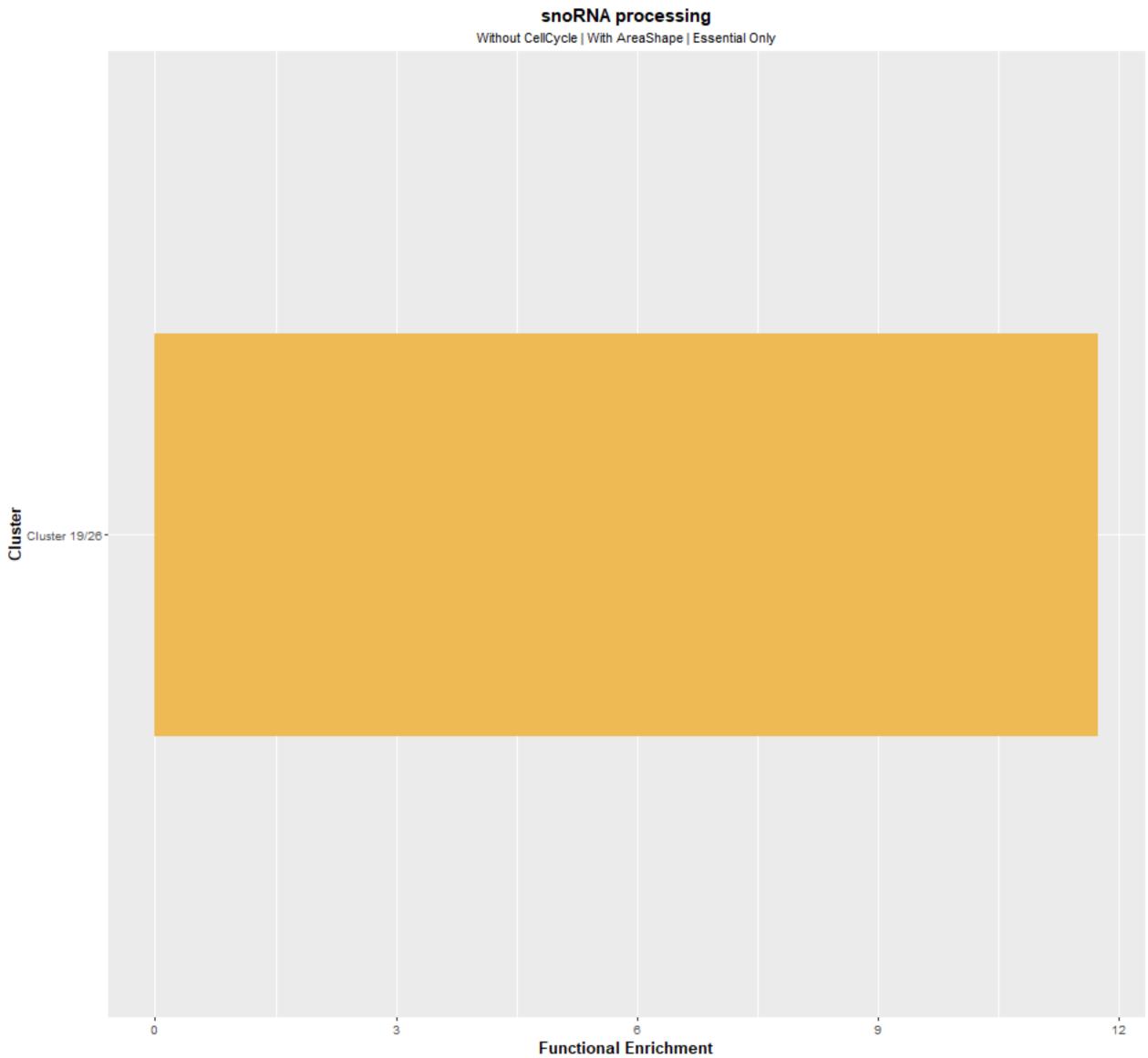
rRNA processing Without CellCycle | With AreaShape | No Vesicle Cluster 3/39 -Cluster 15/39 Cluster 7/39 2 **Functional Enrichment**

signaling Without CellCycle | With AreaShape | All Genes Cluster 30/40 -3 ż **Functional Enrichment**

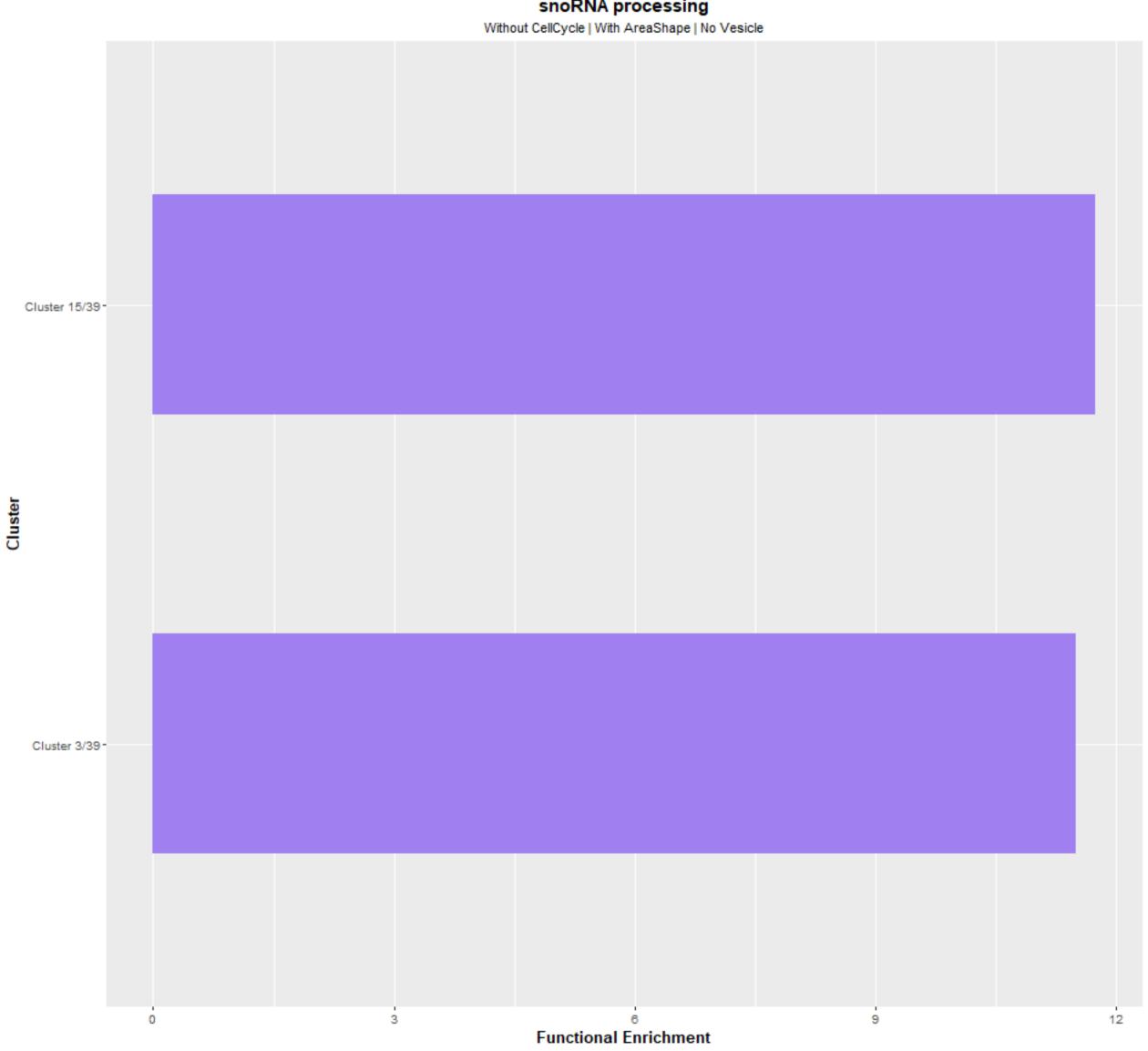
signaling Without CellCycle | With AreaShape | No Vesicle Cluster 29/39 3 ż **Functional Enrichment**

snoRNA processing





snoRNA processing



telomere organization Without CellCycle | With AreaShape | All Genes Cluster 29/40 -

10

15

5

telomere organization Without CellCycle | With AreaShape | No Vesicle Cluster 28/39 5 10 15 **Functional Enrichment**

telomere organization Without CellCycle | With AreaShape | Nonessential Only Cluster 21/23 -Cluster 15/23 15 5 10 **Functional Enrichment**

transcription from RNA polymerase I promoter Without CellCycle | With AreaShape | All Genes Cluster 11/40 -Cluster 20/40 -**Functional Enrichment**

transcription from RNA polymerase I promoter Without CellCycle | With AreaShape | Essential Only Cluster 20/26 2 **Functional Enrichment**

transcription from RNA polymerase I promoter Without CellCycle | With AreaShape | No Vesicle Cluster 3/39 -Cluster 19/39 -**Functional Enrichment**

transcription from RNA polymerase I promoter Without CellCycle | With AreaShape | Nonessential Only Cluster 19/23 2 **Functional Enrichment**

transcription from RNA polymerase II promoter Without CellCycle | With AreaShape | All Genes Cluster 6/40 -Cluster 11/40 -Cluster 30/40 -Cluster 14/40 -2 **Functional Enrichment**

transcription from RNA polymerase II promoter Without CellCycle | With AreaShape | Essential Only Cluster 10/26 -Cluster 20/26 Cluster 25/26 2 **Functional Enrichment**

transcription from RNA polymerase II promoter Without CellCycle | With AreaShape | No Vesicle Cluster 14/39 -Cluster 3/39 -Cluster 29/39 Cluster 4/39 -2 **Functional Enrichment**

transcription from RNA polymerase II promoter Without CellCycle | With AreaShape | Nonessential Only Cluster 9/23 ó 3 Functional Enrichment

transcription from RNA polymerase III promoter Without CellCycle | With AreaShape | All Genes Cluster 11/40 -Cluster 7/40 -5 10 15 **Functional Enrichment**

transcription from RNA polymerase III promoter Without CellCycle | With AreaShape | Essential Only Cluster 19/26 -Cluster 20/26 -3 9 12 **Functional Enrichment**

transcription from RNA polymerase III promoter Without CellCycle | With AreaShape | No Vesicle Cluster 3/39 -Cluster 15/39 5 10 15 **Functional Enrichment**

transposition Without CellCycle | With AreaShape | All Genes Cluster 29/40 -Cluster Cluster 25/40 -10 20 30 **Functional Enrichment**

transposition Without CellCycle | With AreaShape | No Vesicle Cluster 28/39 Cluster Cluster 24/39 -10 20 30 **Functional Enrichment**

transposition Without CellCycle | With AreaShape | Nonessential Only Cluster 15/23 Cluster 5/23 10 20 30 40 **Functional Enrichment**

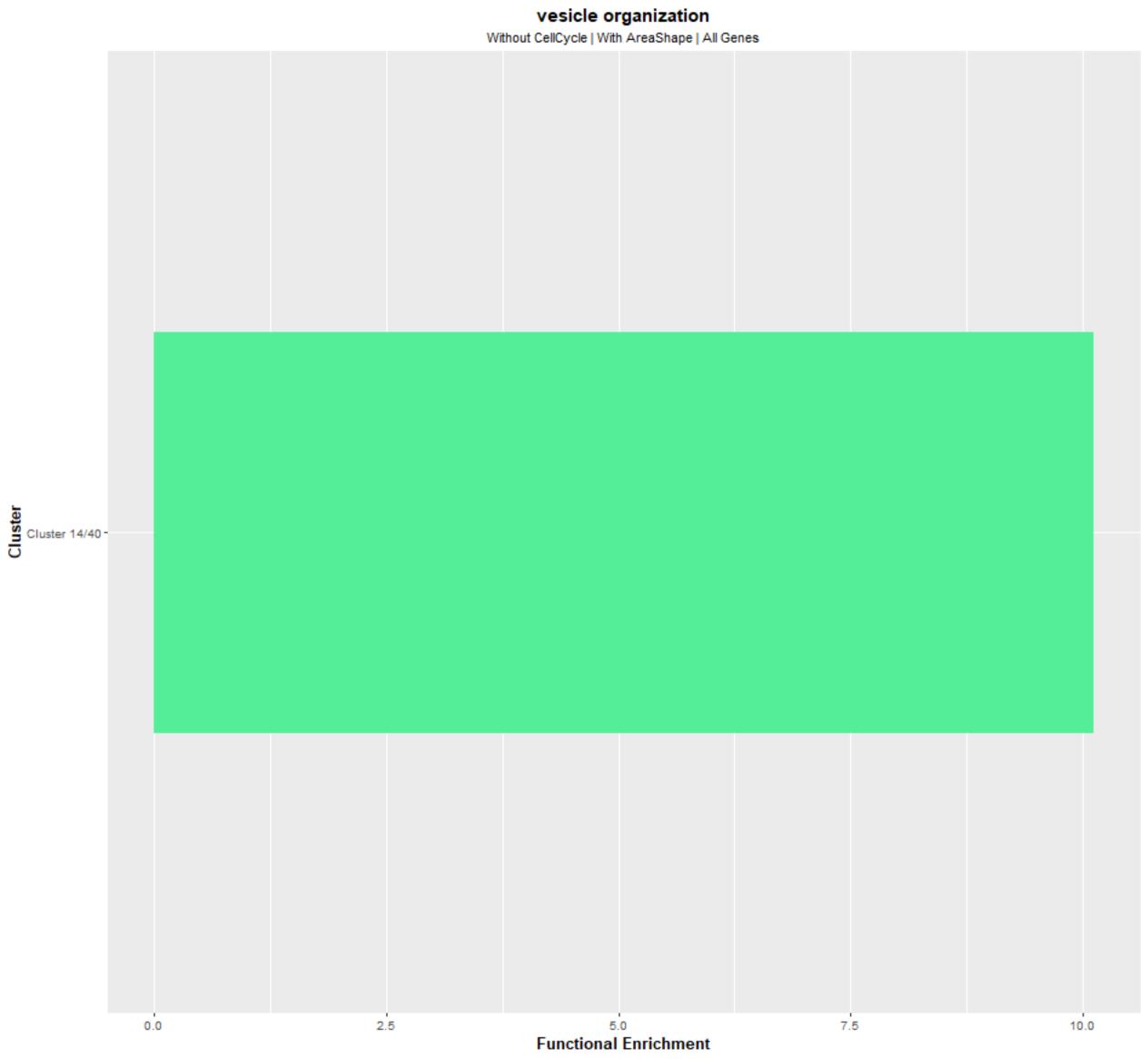
tRNA aminoacylation for protein translation Without CellCycle | With AreaShape | All Genes Cluster 7/40 -15 ó 10 5 **Functional Enrichment**

tRNA aminoacylation for protein translation Without CellCycle | With AreaShape | Essential Only Cluster 19/26 15 5 10 **Functional Enrichment**

tRNA aminoacylation for protein translation Without CellCycle | With AreaShape | No Vesicle Cluster 15/39 15 5 10 **Functional Enrichment**

vacuole organization Without CellCycle | With AreaShape | Essential Only Cluster 25/28 2

vacuole organization Without CellCycle | With AreaShape | Nonessential Only Cluster 12/23 Cluster 10/23 3 Functional Enrichment



vesicle organization Without CellCycle | With AreaShape | Essential Only Cluster 25/28 6 **Functional Enrichment**