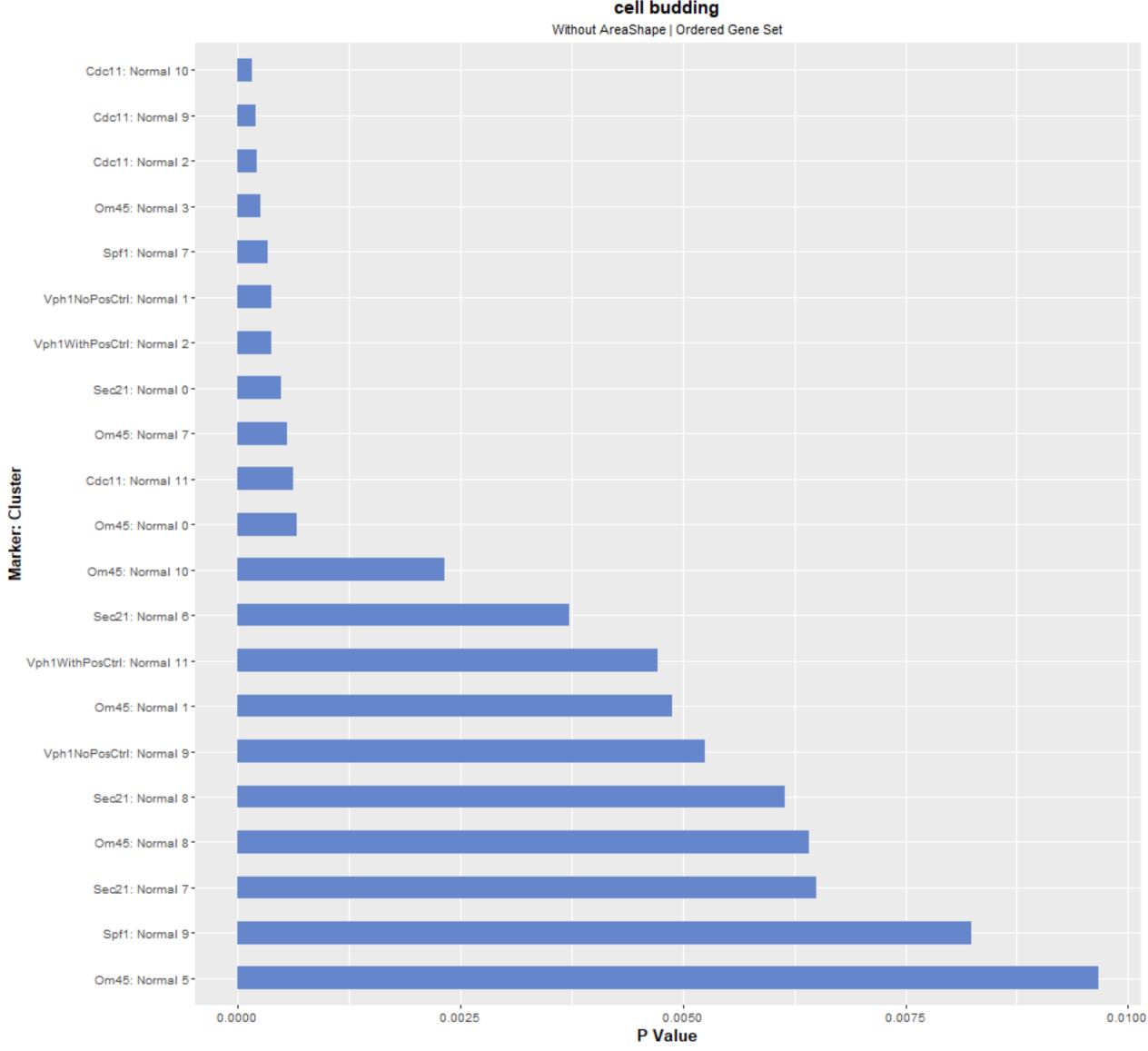
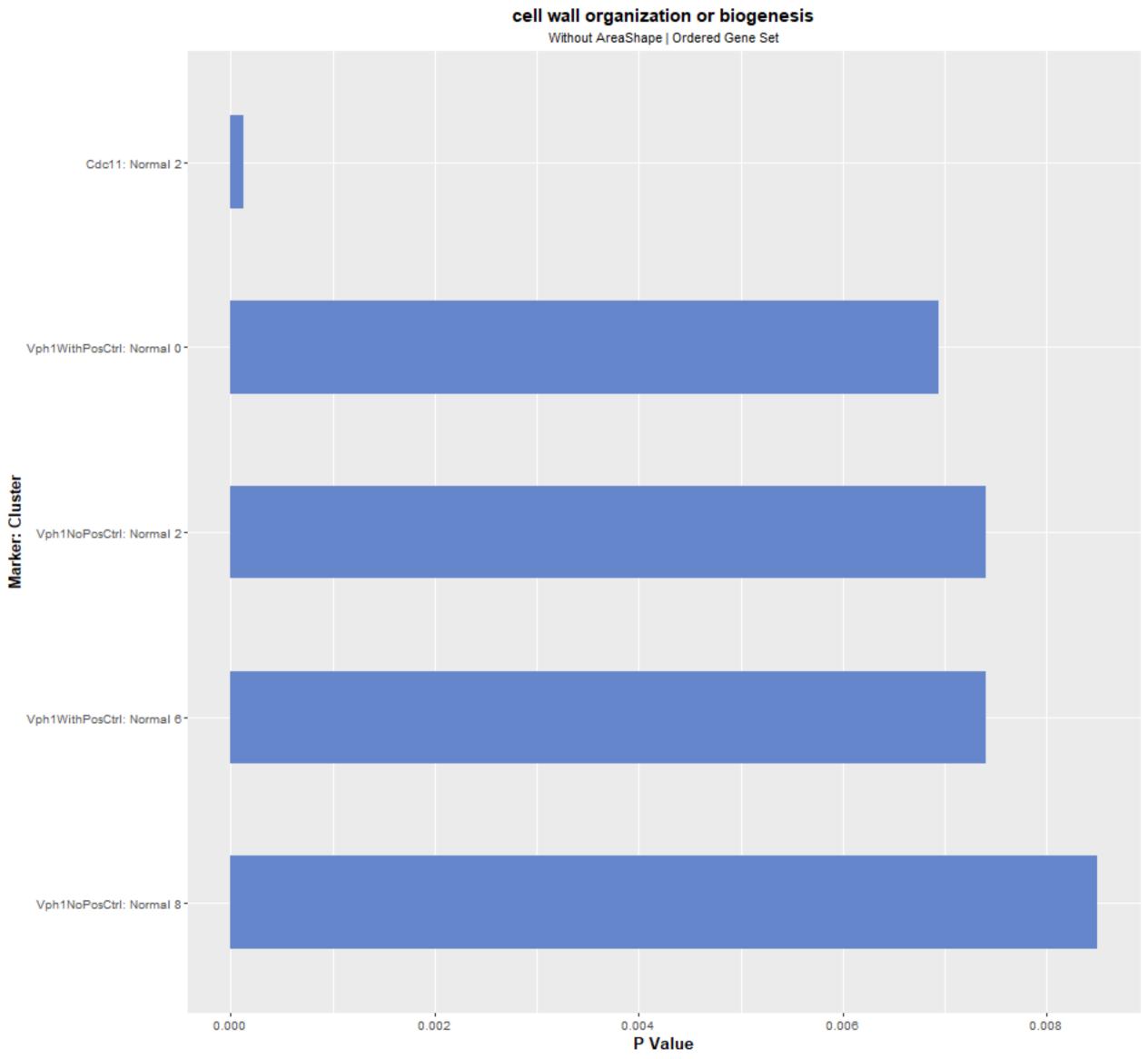
cell budding

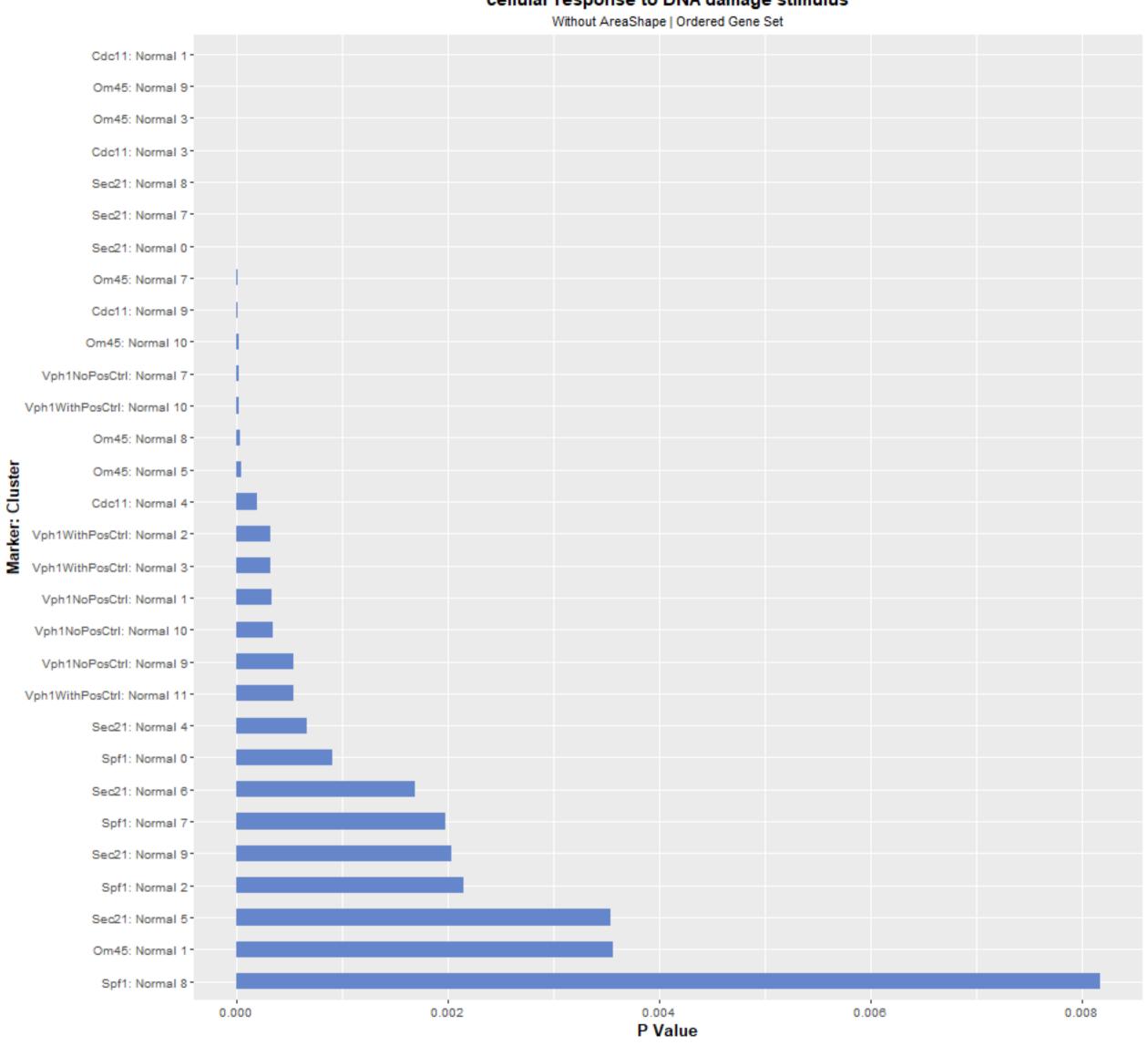


cell morphogenesis Without AreaShape | Ordered Gene Set Cdc11: Normal 10 -Marker: Cluster Om45: Normal 31 0.000 0.001 0.002 0.003 0.004 P Value

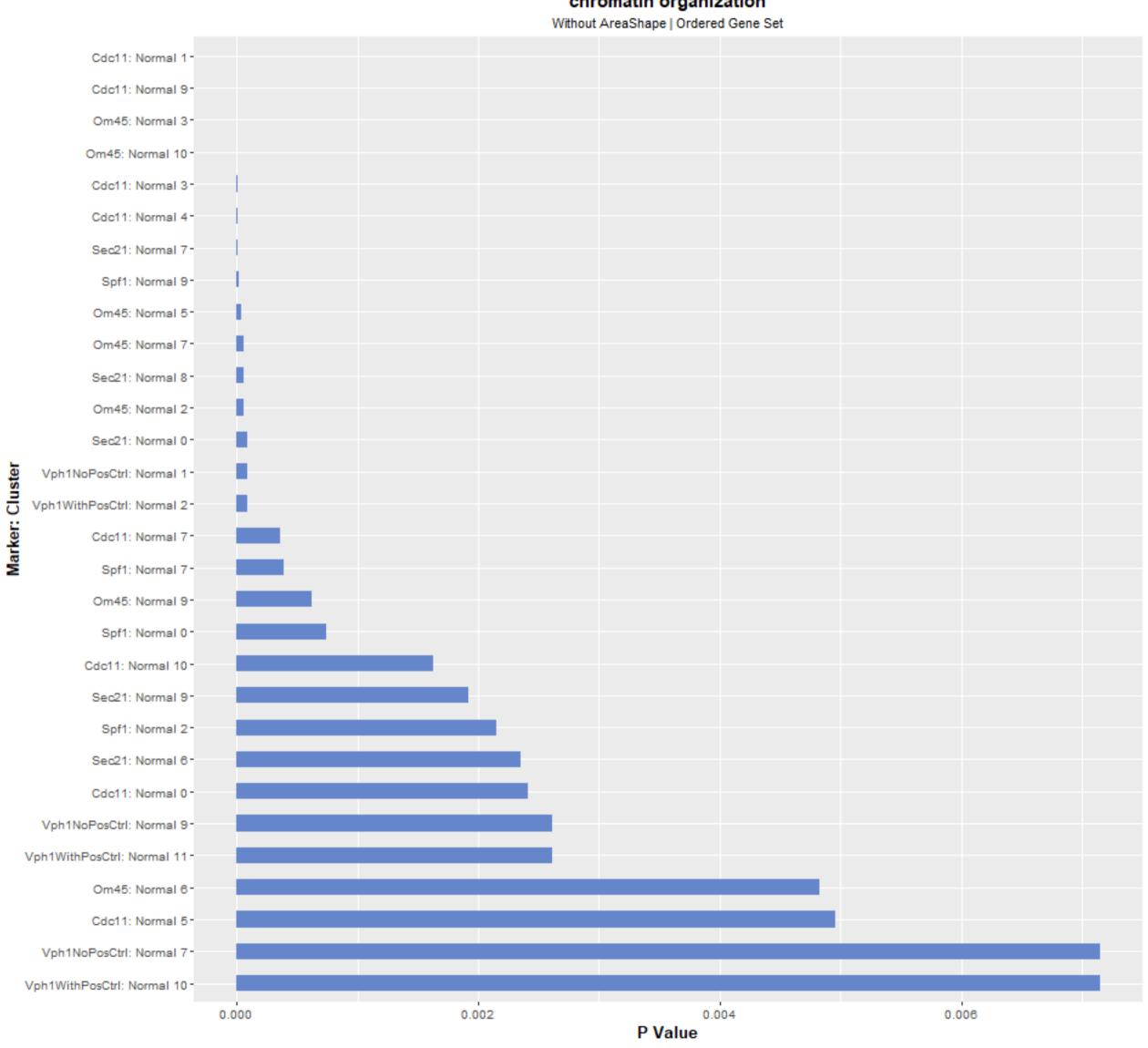


cellular amino acid metabolic process Without AreaShape | Ordered Gene Set Vph1NoPosCtrl: Normal 9 -Marker: Cluster Vph1WithPosCtrl: Normal 11 0.002 0.004 0.006 0.000 P Value

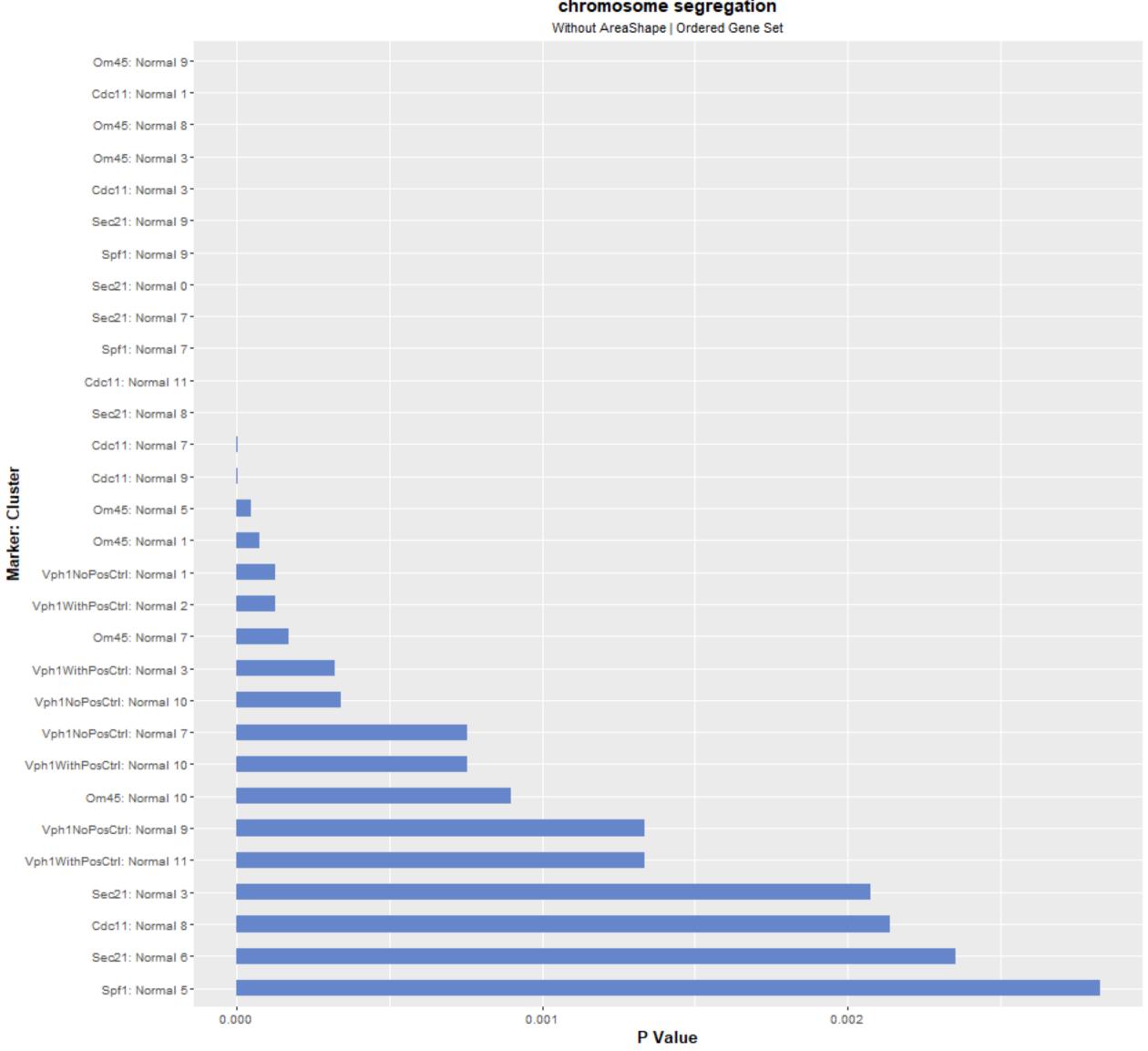
cellular response to DNA damage stimulus



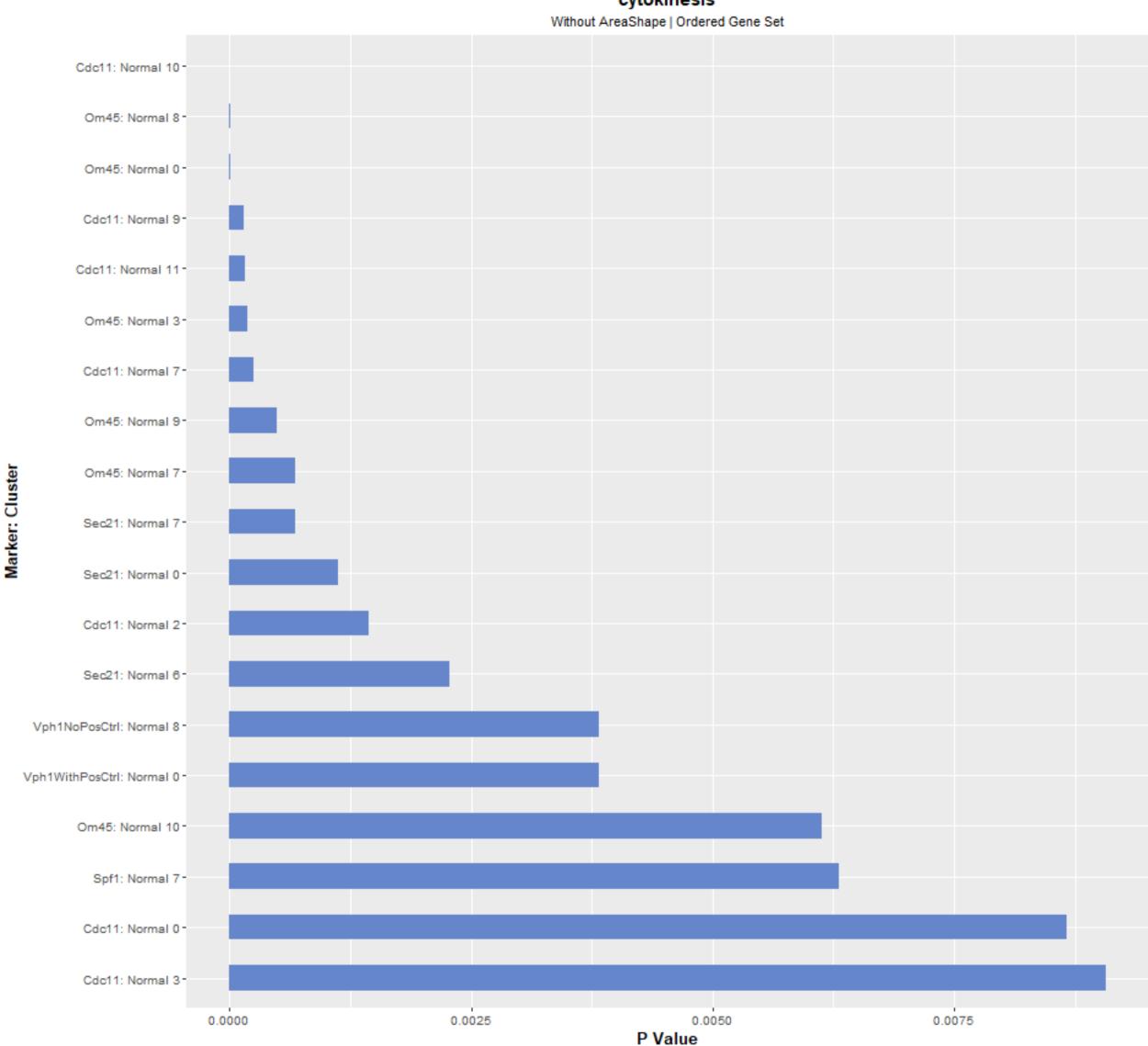
chromatin organization



chromosome segregation

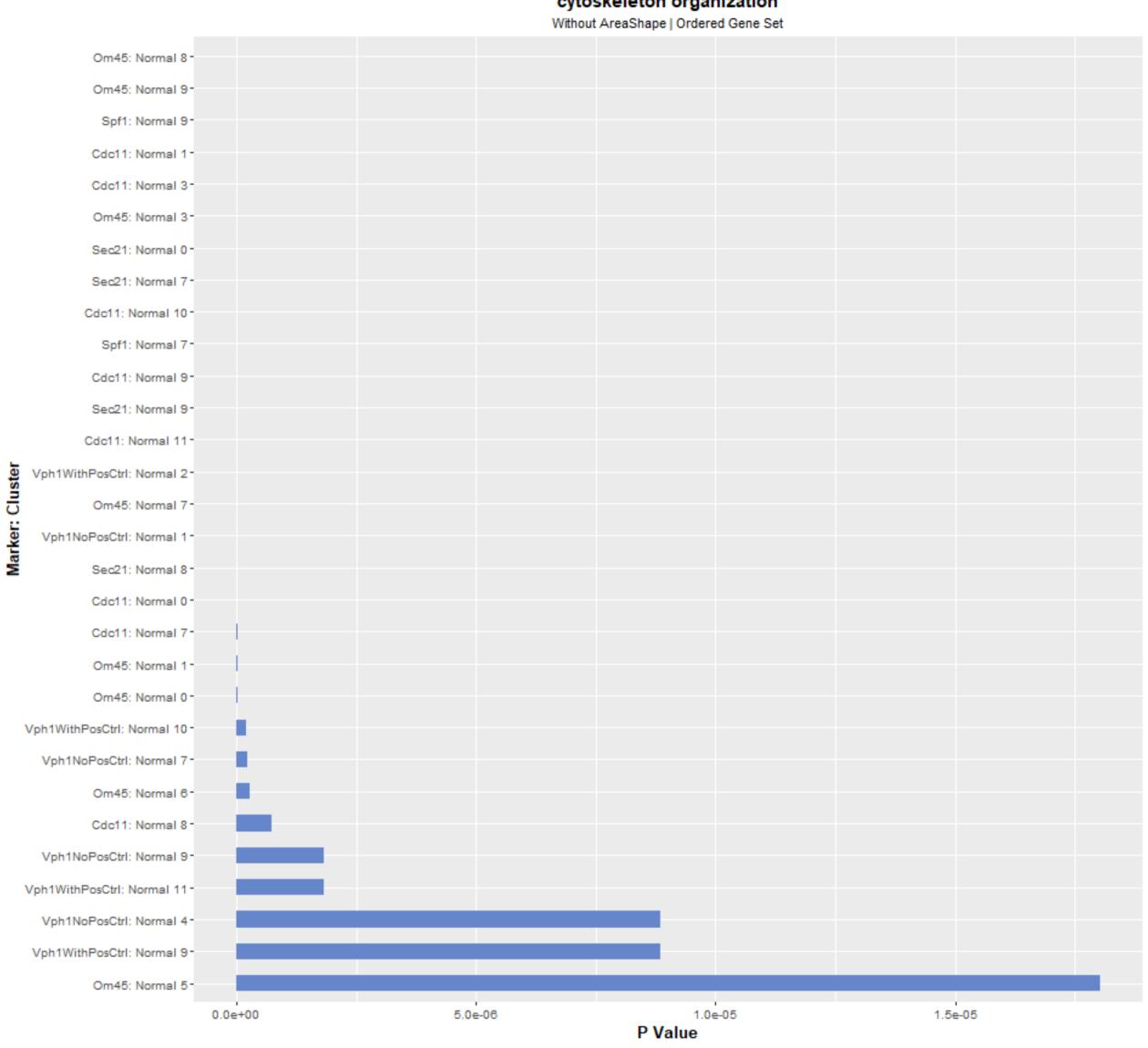


cytokinesis

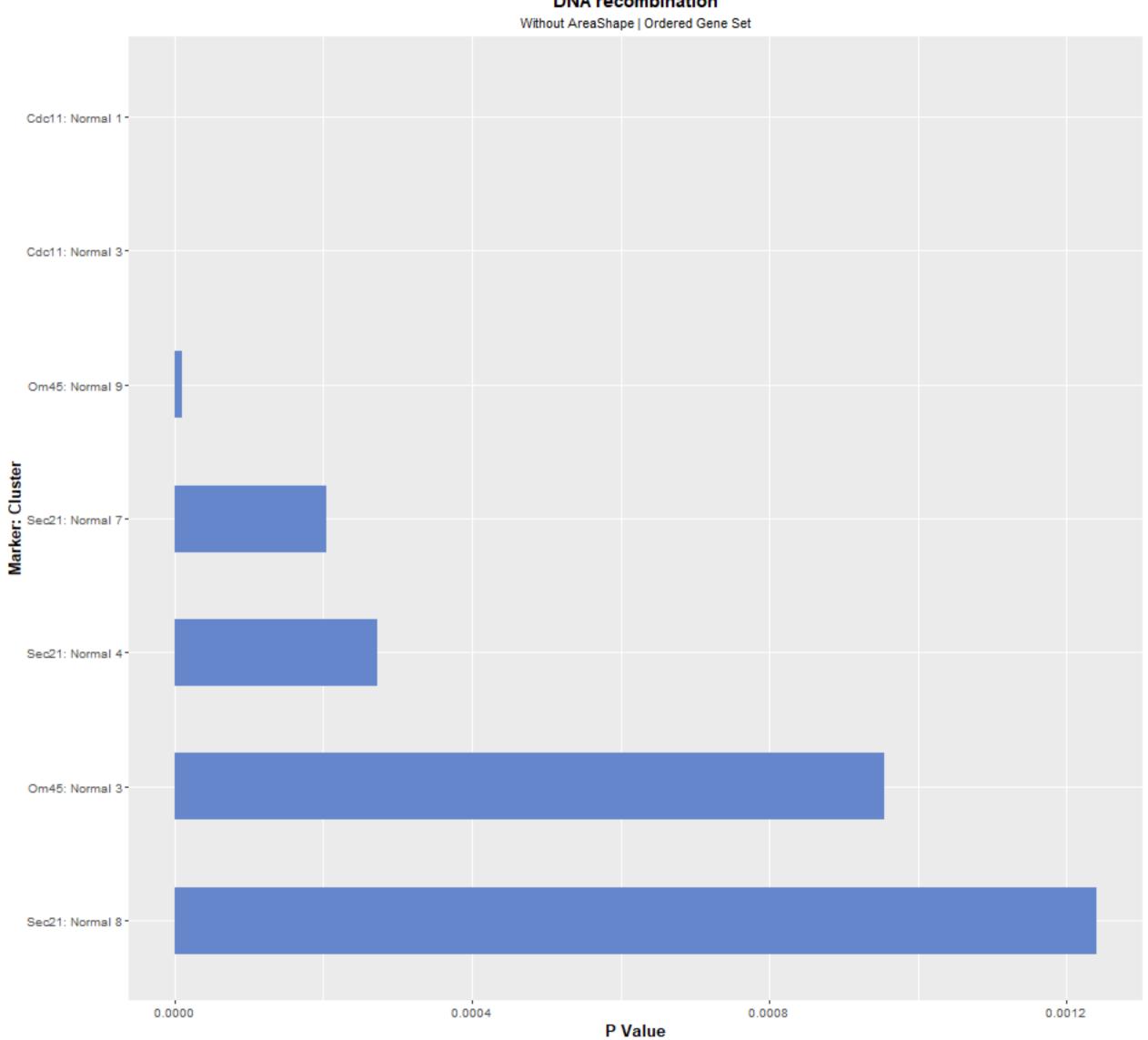


cytoplasmic translation Without AreaShape | Ordered Gene Set Vph1NoPosCtrl: Normal 9 -Marker: Cluster Vph1WithPosCtrl: Normal 11 0.000 0.002 0.006 0.004 P Value

cytoskeleton organization



DNA recombination

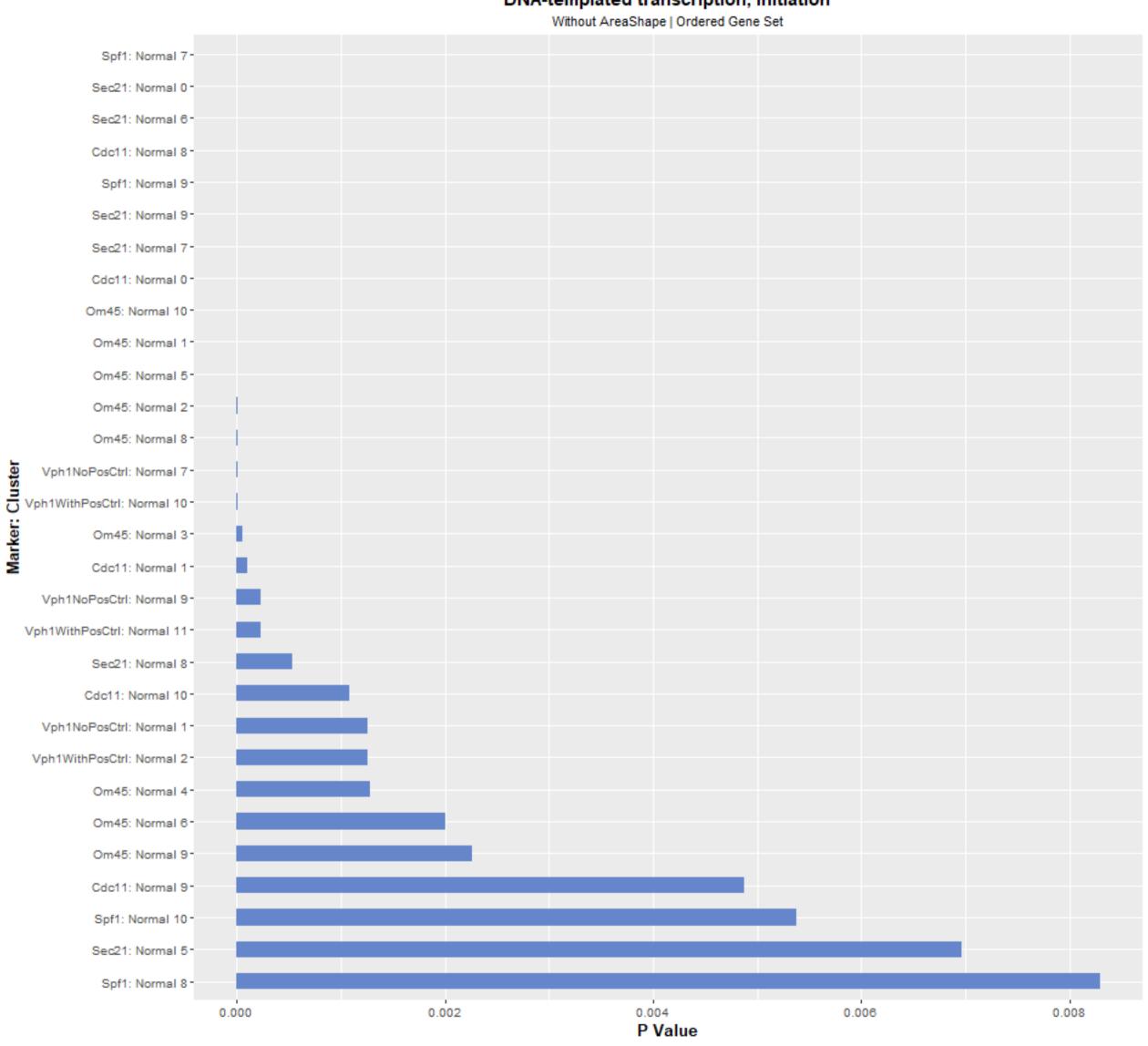


DNA repair Without AreaShape | Ordered Gene Set Cdc11: Normal 1 Om45: Normal 3-Om45: Normal 9 -Cdc11: Normal 3-Sec21: Normal 8 -Sec21: Normal 7 -Sec21: Normal 0 -Om45: Normal 8 -Cdc11: Normal 9 -Om45: Normal 10 -Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Om45: Normal 5 -Marker: Cluster Om45: Normal 7 -Cdc11: Normal 4-Vph1NoPosCtrl: Normal 1 -Vph1WithPosCtrl: Normal 2 -Vph1NoPosCtrl: Normal 10 -Vph1WithPosCtrl: Normal 3 ** Vph1NoPosCtrl: Normal 9 -Vph1WithPosCtrl: Normal 11 -Sec21: Normal 41 Om45: Normal 1-Sec21: Normal 91 Spf1: Normal 0 -Sec21: Normal 6-Spf1: Normal 7 -Spf1: Normal 21 Sec21: Normal 51 Spf1: Normal 8 -0.000 0.002 0.004 P Value

DNA replication Without AreaShape | Ordered Gene Set Cdc11: Normal 1-Om45: Normal 9 -Om45: Normal 31 Cdc11: Normal 3-Cdc11: Normal 9-Om45: Normal 7 -Sec21: Normal 7 -Spf1: Normal 7 -Sec21: Normal 0 -Sec21: Normal 8 -Om45: Normal 8 -Vph1NoPosCtrl: Normal 1 -Marker: Cluster Vph1WithPosCtrl: Normal 2 Om45: Normal 1-Spf1: Normal 9 -Sec21: Normal 91 Vph1NoPosCtrl: Normal 9 -Om45: Normal 10 -Vph1WithPosCtrl: Normal 11 -Spf1: Normal 21 Sec21: Normal 6-Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Cdc11: Normal 0 -Spf1: Normal 5 Cdc11: Normal 41 0.000 0.002 0.004 0.006 P Value

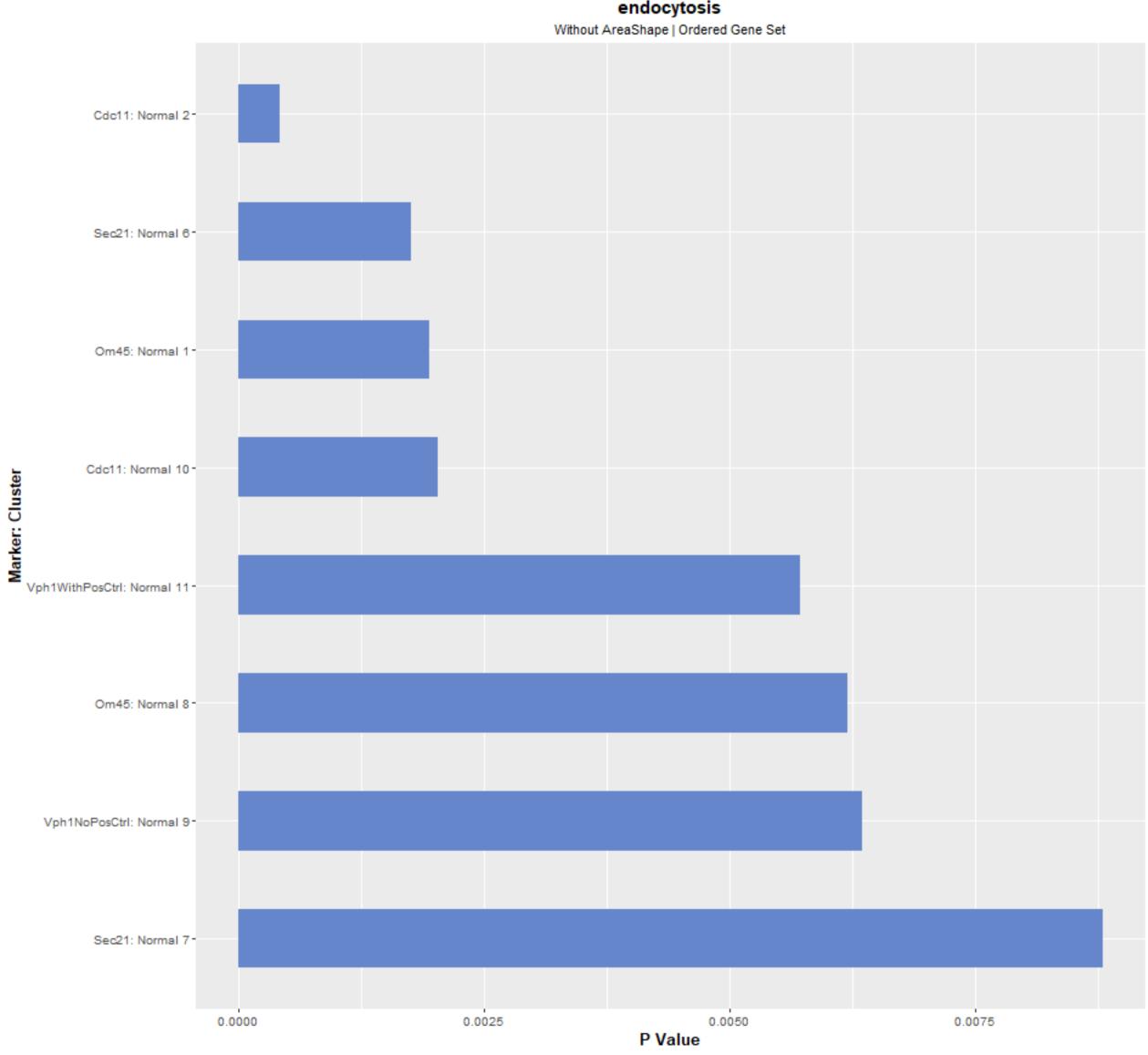
DNA-templated transcription, elongation Without AreaShape | Ordered Gene Set Om45: Normal 10 -Om45: Normal 5 Sec21: Normal 7 -Cdc11: Normal 0 -Cdc11: Normal 1-Om45: Normal 31 Sec21: Normal 41 Sec21: Normal 6-Marker: Cluster Cdc11: Normal 8 -Sec21: Normal 8 -Vph1NoPosCtrl: Normal 2 -Vph1WithPosCtrl: Normal 6 -Spf1: Normal 10 -Sec21: Normal 0 -Om45: Normal 1-Om45: Normal 21 Om45: Normal 8 -0.0050 0.0000 0.0025 0.0075 0.0100 P Value

DNA-templated transcription, initiation



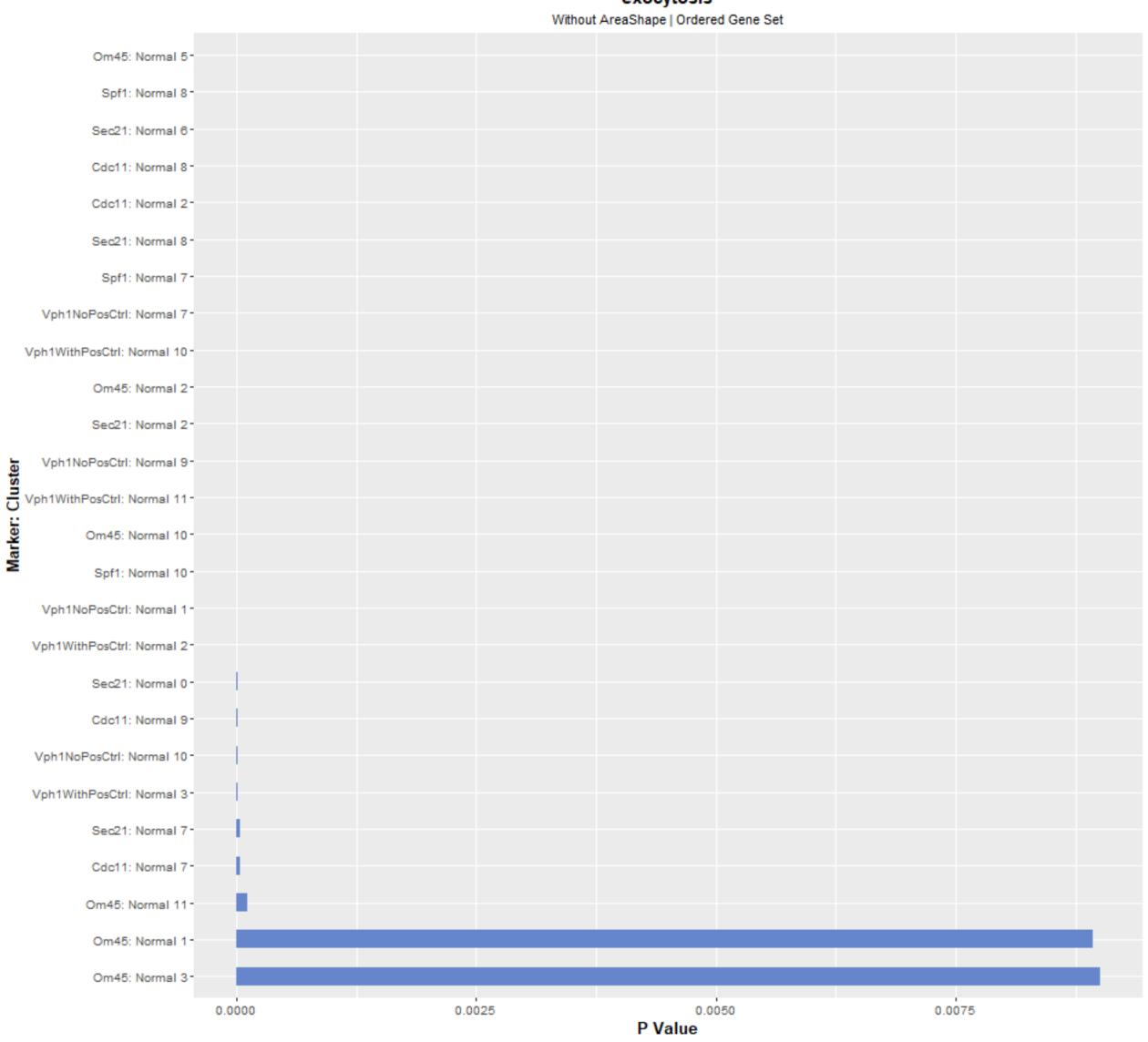
DNA-templated transcription, termination Without AreaShape | Ordered Gene Set Om45: Normal 10 -Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Vph1NoPosCtrl: Normal 9 -Vph1WithPosCtrl: Normal 11 -Om45: Normal 31 Marker: Cluster Om45: Normal 8 -Vph1NoPosCtrl: Normal 10 -Vph1WithPosCtrl: Normal 3 -Cdc11: Normal 8 -Vph1NoPosCtrl: Normal 1 -Vph1WithPosCtrl: Normal 2-Sec21: Normal 6-Om45: Normal 9 -0.000 0.001 0.002 0.003 0.004 0.00 P Value

endocytosis

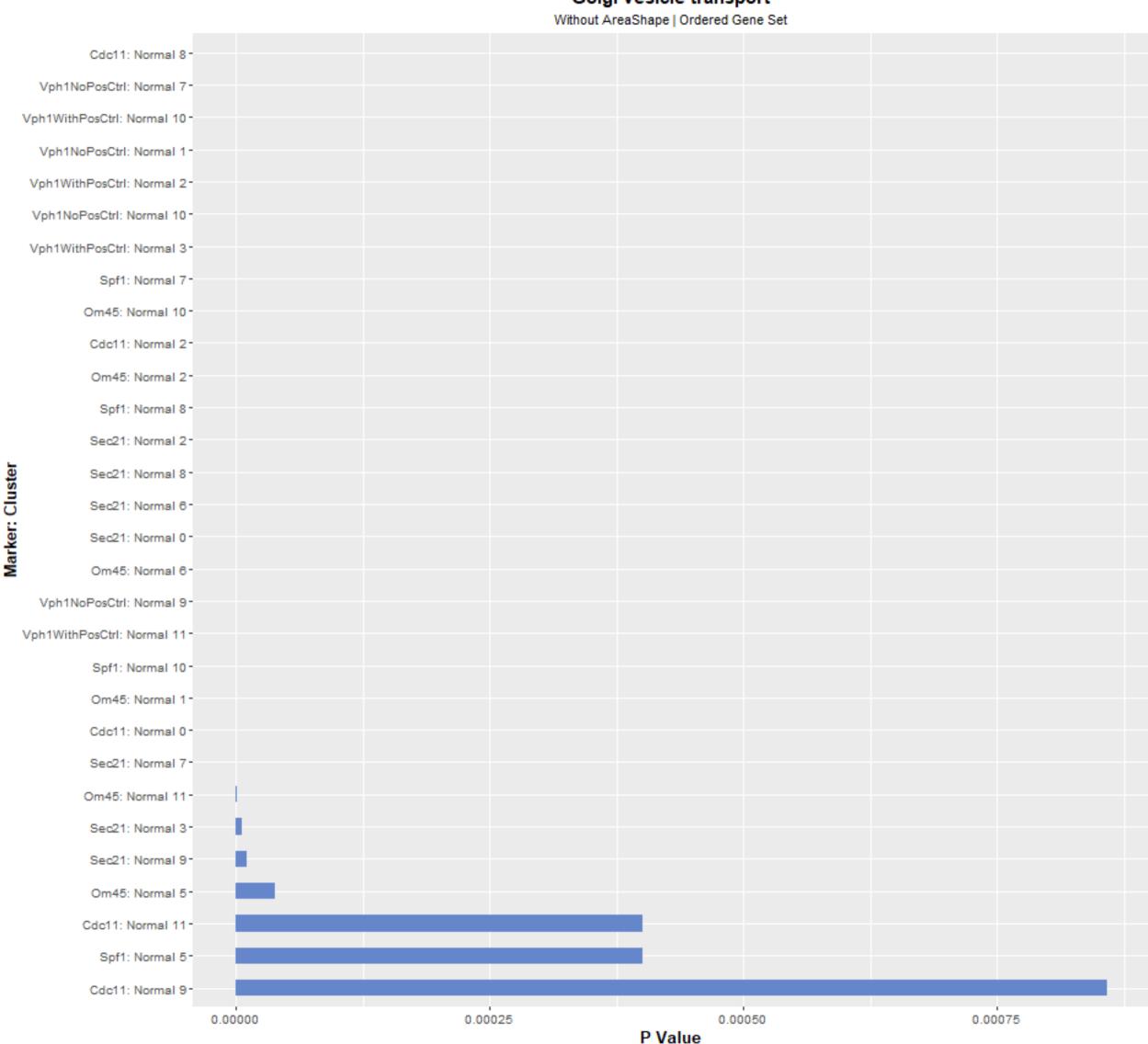


endosomal transport Without AreaShape | Ordered Gene Set Vph1WithPosCtrl: Normal 8 -Marker: Cluster Vph1NoPosCtrl: Normal 5 -0.0000 0.0004 0.0008 0.0012 P Value

exocytosis



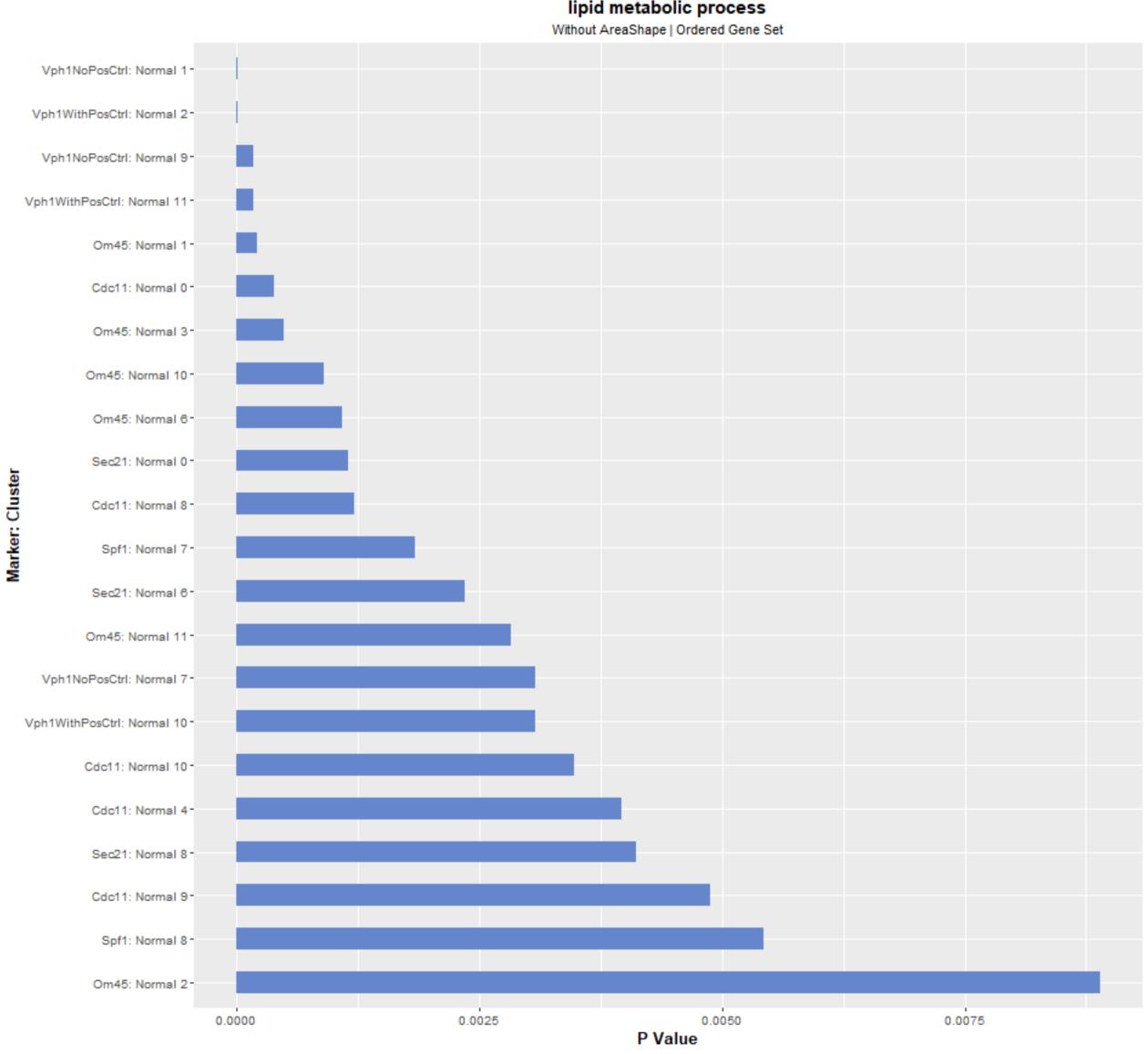
Golgi vesicle transport



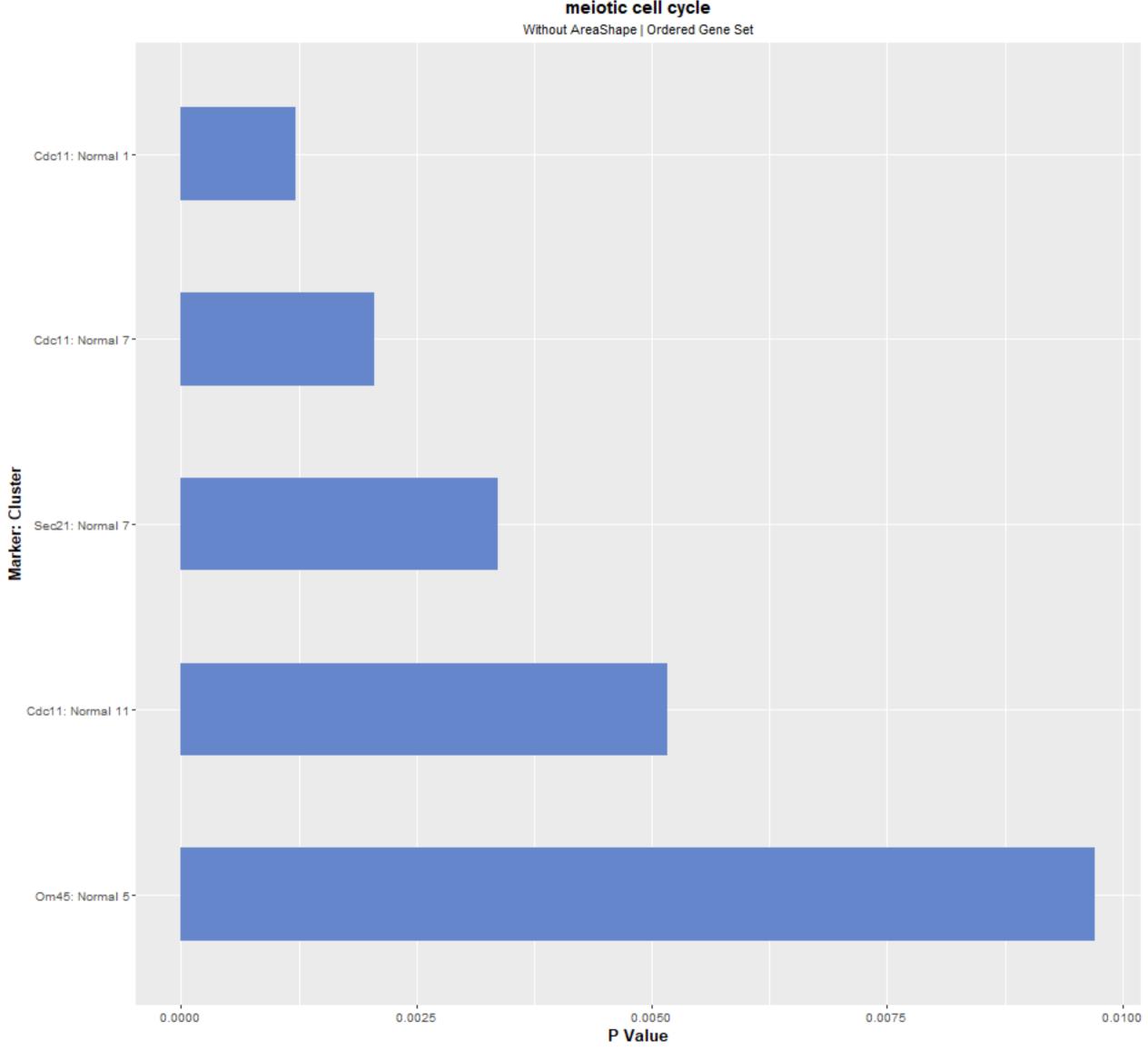
invasive growth in response to glucose limitation Without AreaShape | Ordered Gene Set Om45: Normal 0 -Cdc11: Normal 9 -Marker: Cluster Cdc11: Normal 5 -Spf1: Normal 2-0.002 0.006 0.000 0.004 P Value

ion transport Without AreaShape | Ordered Gene Set Marker: Cluster - 0 lemnoN :24mO 0.000 0.002 0.004 0.006 P Value

lipid metabolic process



meiotic cell cycle

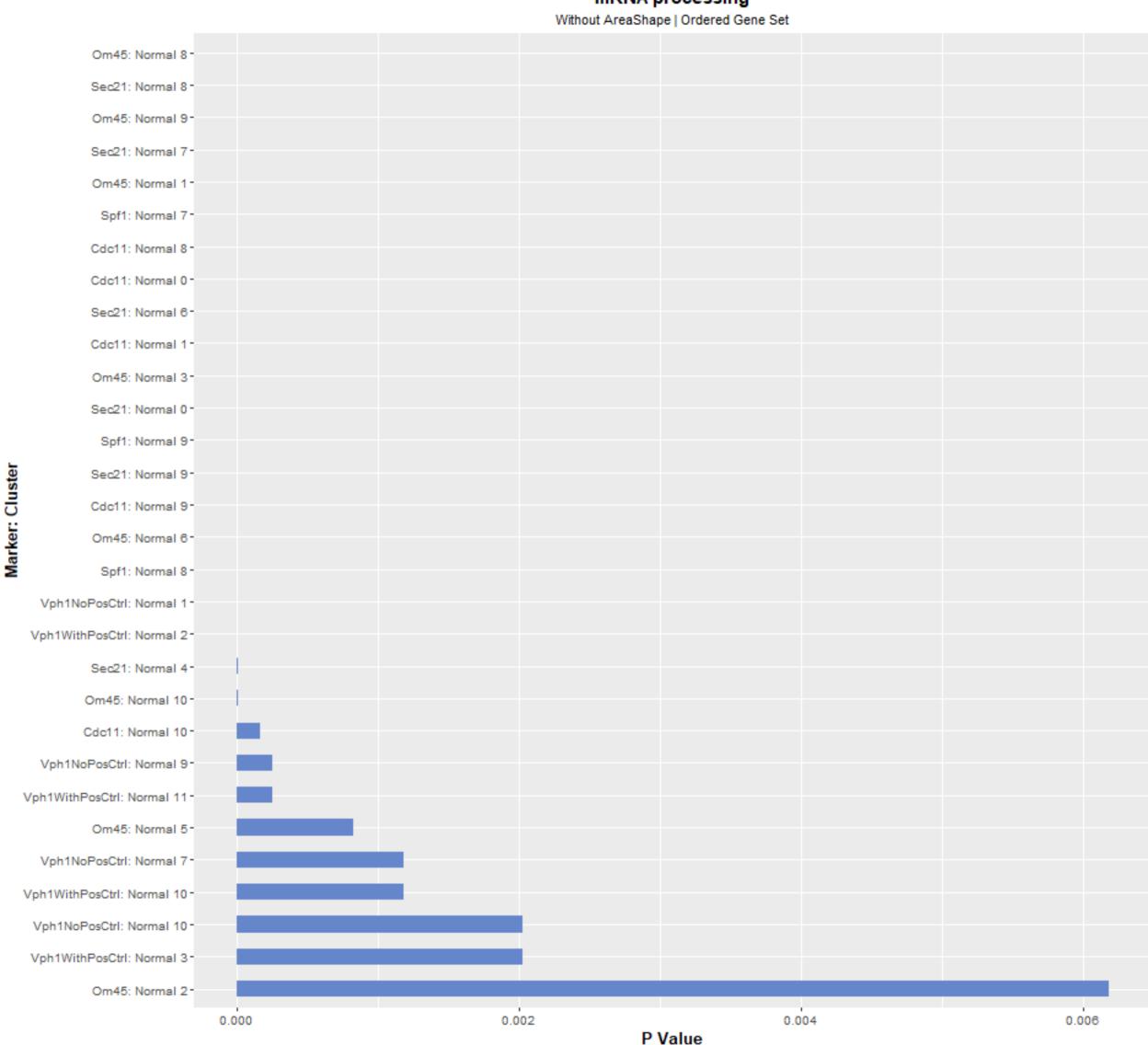


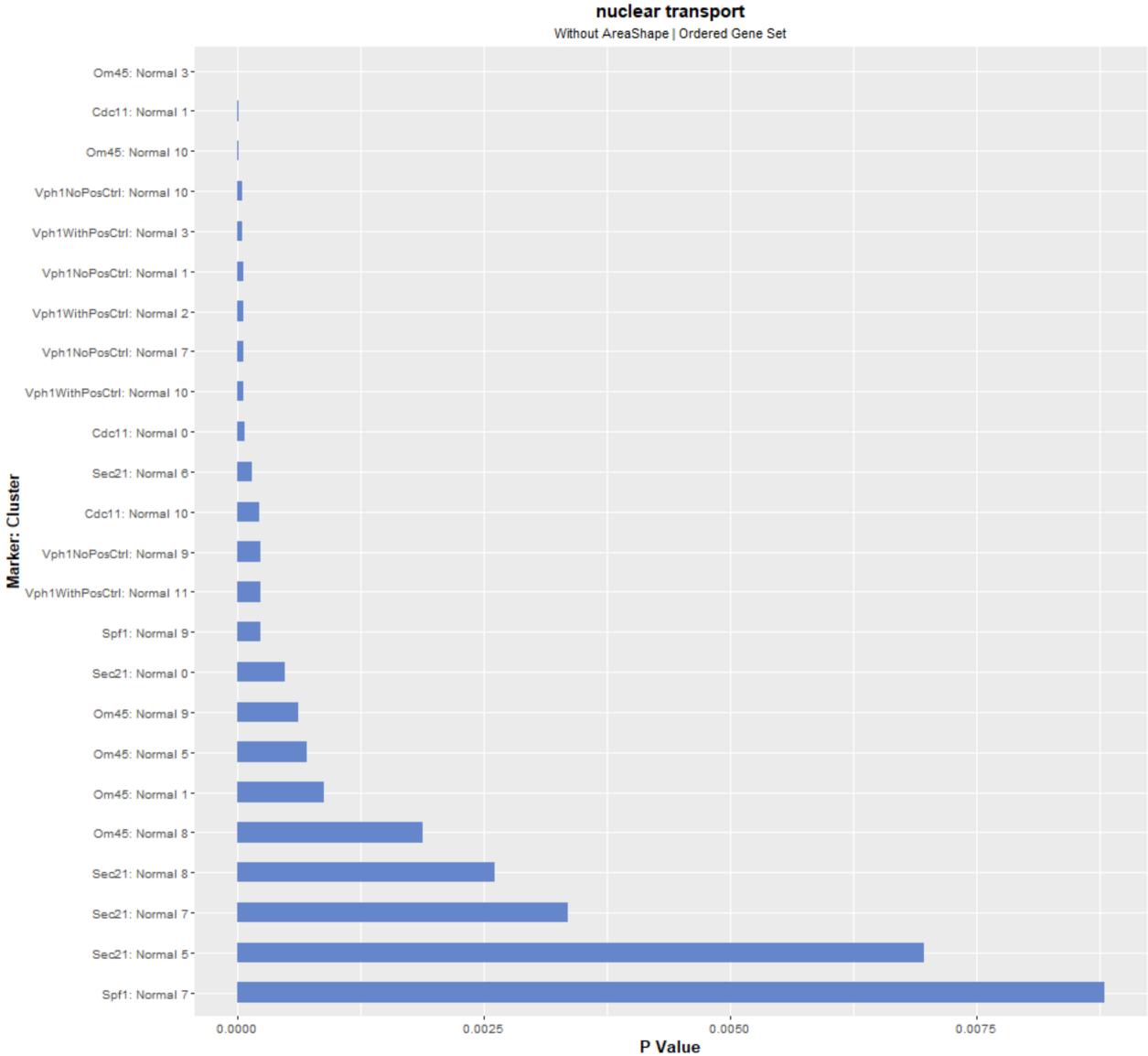
membrane fusion Without AreaShape | Ordered Gene Set Cdc11: Normal 8 Vph1NoPosCtrl: Normal 10 -Vph1WithPosCtrl: Normal 3 -Vph1NoPosCtrl: Normal 1 -Vph1WithPosCtrl: Normal 2 -Sec21: Normal 8 -Om45: Normal 10 -Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Spf1: Normal 7-Spf1: Normal 8 -Sec21: Normal 21 Om45: Normal 21 Marker: Cluster Sec21: Normal 6-Vph1WithPosCtrl: Normal 11 Vph1NoPosCtrl: Normal 9 -Sec21: Normal 7 -Om45: Normal 1-Sec21: Normal 0 -Vph1WithPosCtrl: Normal 8 -Vph1NoPosCtrl: Normal 5 -Spf1: Normal 10 -Cdc11: Normal 21 Sec21: Normal 31 Spf1: Normal 5-Om45: Normal 5-Cdc11: Normal 111 Om45: Normal 6-Om45: Normal 111 Cdc11: Normal 0 -0.000 0.001 0.002 0.003 0.004 P Value

mitochondrion organization Without AreaShape | Ordered Gene Set Marker: Cluster - 0 lemnoN :24mO 0.004 0.006 0.000 0.002 0.00 P Value

mitotic cell cycle Without AreaShape | Ordered Gene Set Cdc11: Normal 1 Om45: Normal 9 -Om45: Normal 3-Om45: Normal 7 -Om45: Normal 8 -Sec21: Normal 0 -Cdc11: Normal 11-Sec21: Normal 7 -Cdc11: Normal 3 Cdc11: Normal 7 -Spf1: Normal 9 -Sec21: Normal 8 -Sec21: Normal 9 -Marker: Cluster Cdc11: Normal 10 -Cdc11: Normal 9 -Vph1NoPosCtrl: Normal 1 -Vph1WithPosCtrl: Normal 2 -Spf1: Normal 7-Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Om45: Normal 1-Cdc11: Normal 0 -Vph1NoPosCtrl: Normal 9 -Vph1WithPosCtrl: Normal 11 -Om45: Normal 0 -Sec21: Normal 6-Cdc11: Normal 2-Spf1: Normal 51 Vph1WithPosCtrl: Normal 3 Vph1NoPosCtrl: Normal 10 -2e-04 0e+00 4e-04 6e-04 P Value

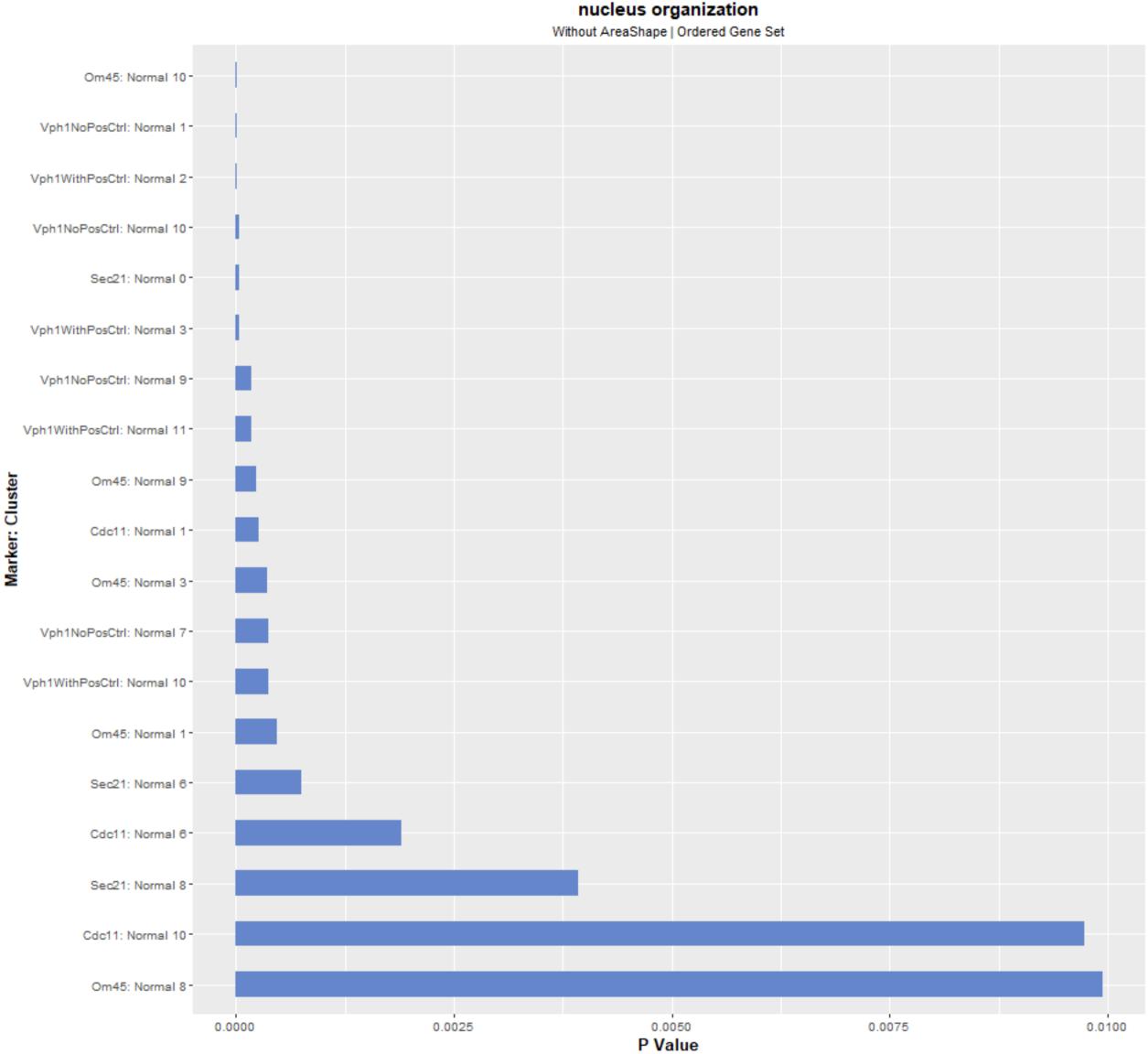
mRNA processing



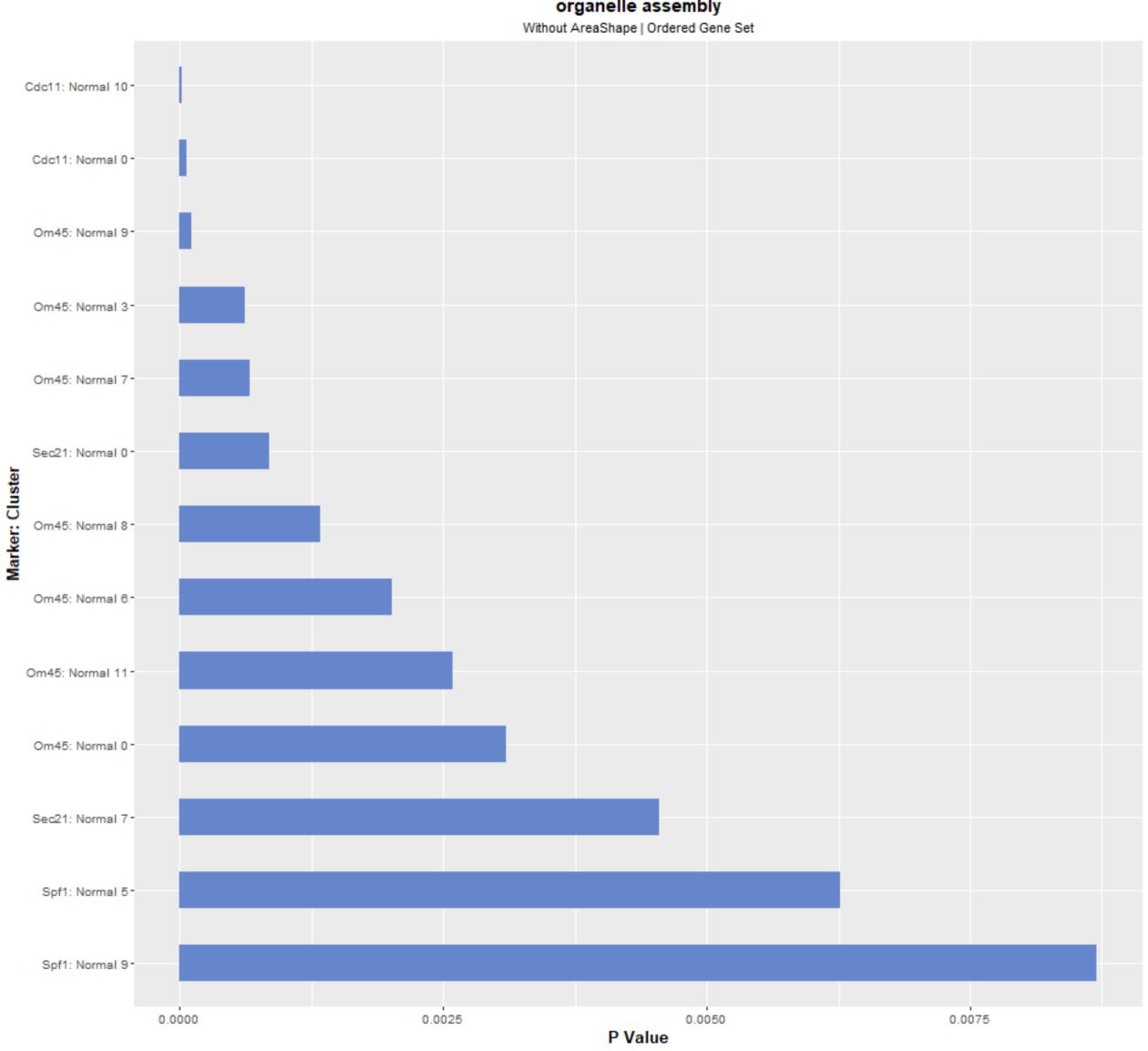


nucleobase-containing compound transport Without AreaShape | Ordered Gene Set Cdc11: Normal 1-Om45: Normal 31 Cdc11: Normal 0 -Sec21: Normal 6-Om45: Normal 10 -Vph1NoPosCtrl: Normal 1 -Vph1WithPosCtrl: Normal 2 Marker: Cluster Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Vph1NoPosCtrl: Normal 10 -Vph1WithPosCtrl: Normal 3 -Sec21: Normal 0 -Vph1WithPosCtrl: Normal 11 -Vph1NoPosCtrl: Normal 9 -Sec21: Normal 51 Sec21: Normal 8 -0.000 0.002 0.004 P Value

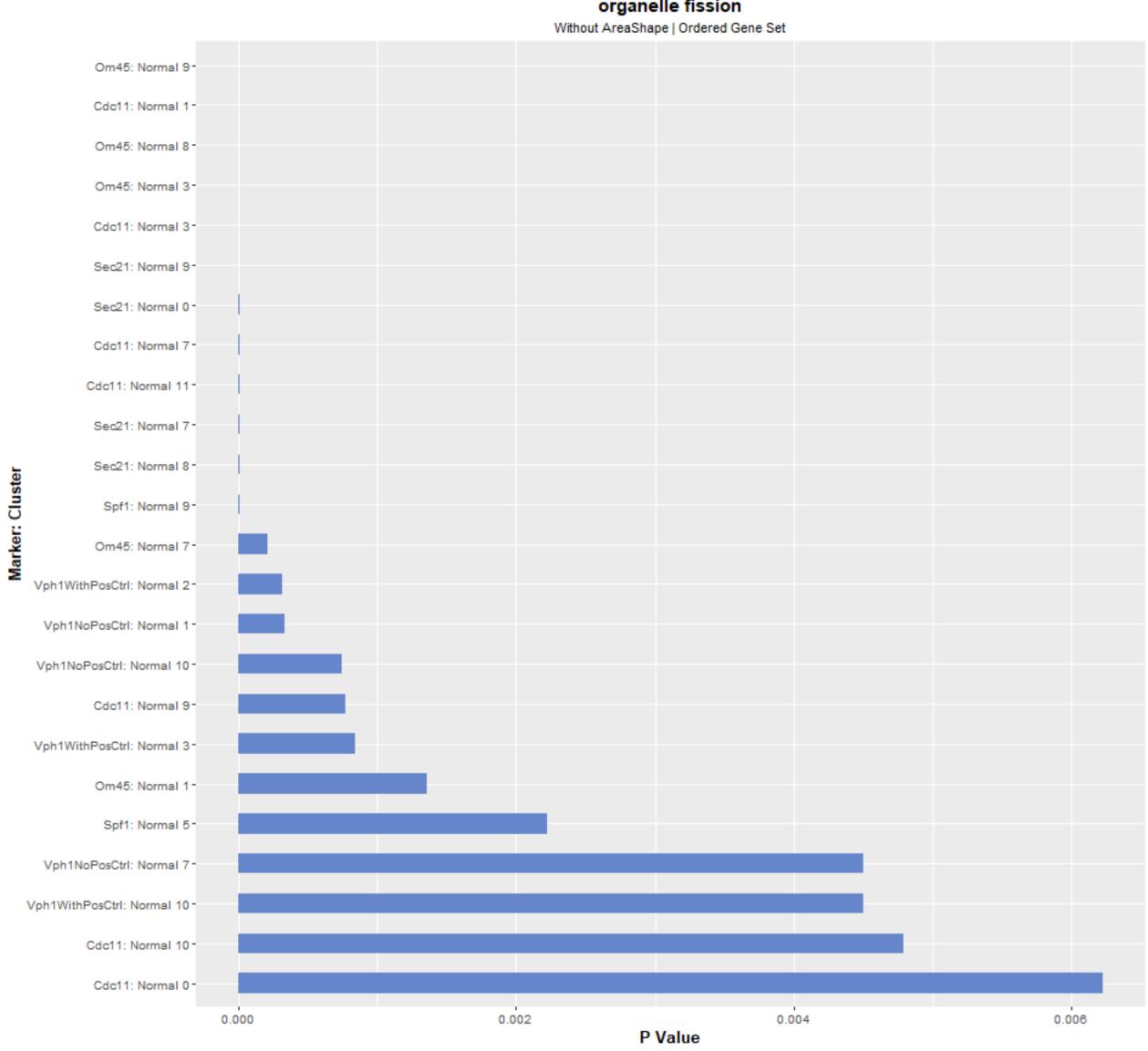
nucleus organization



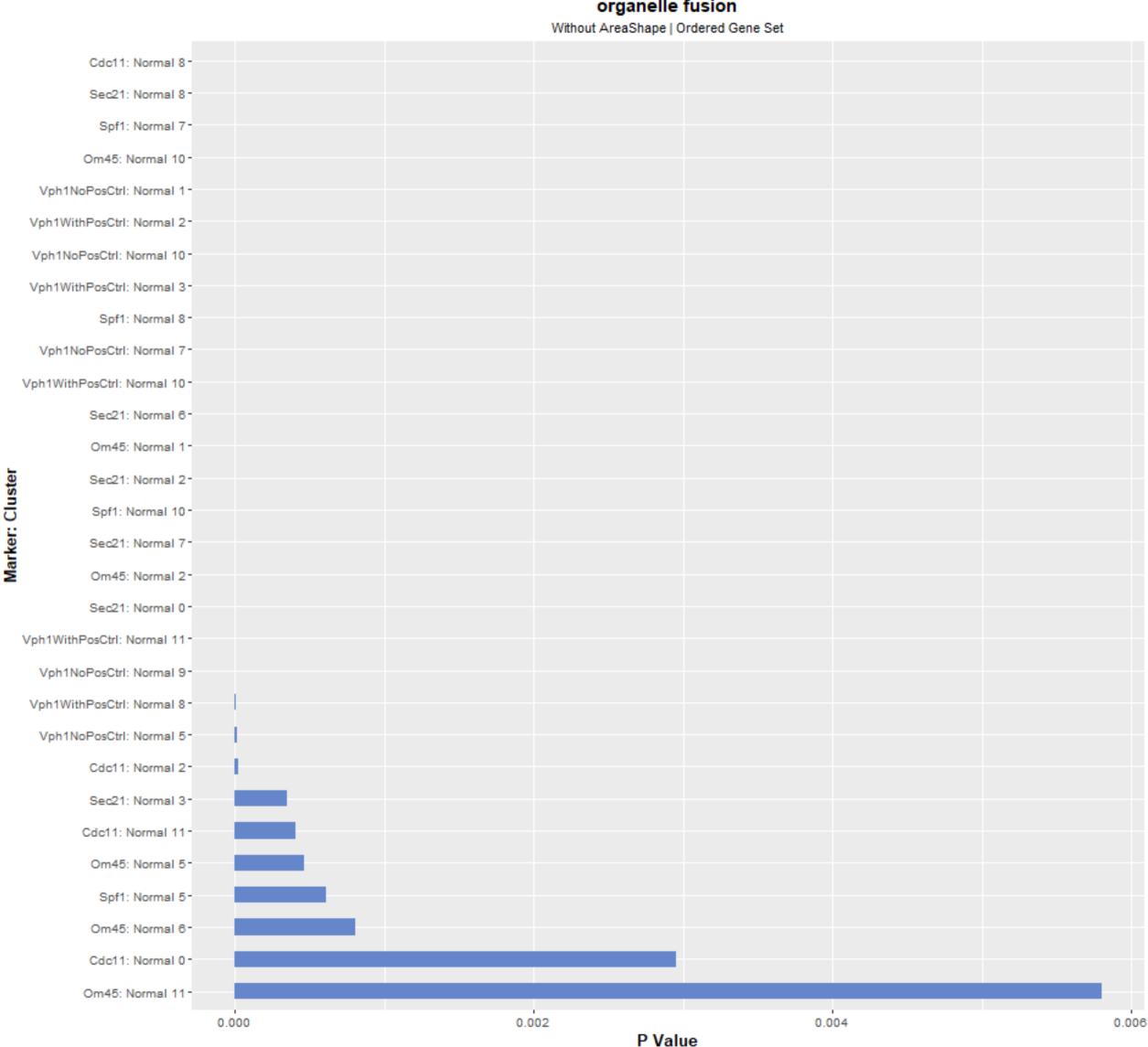
organelle assembly



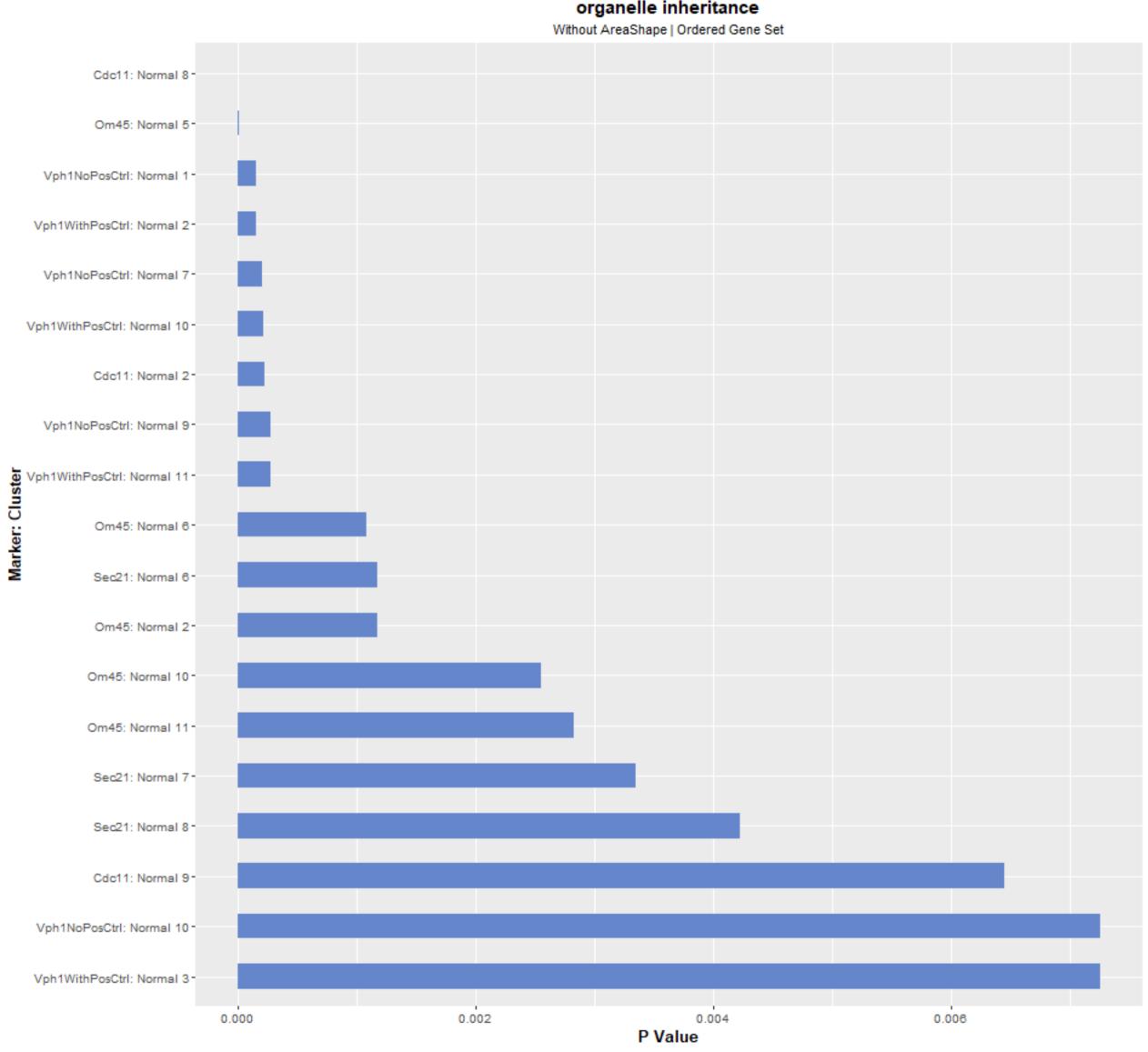
organelle fission



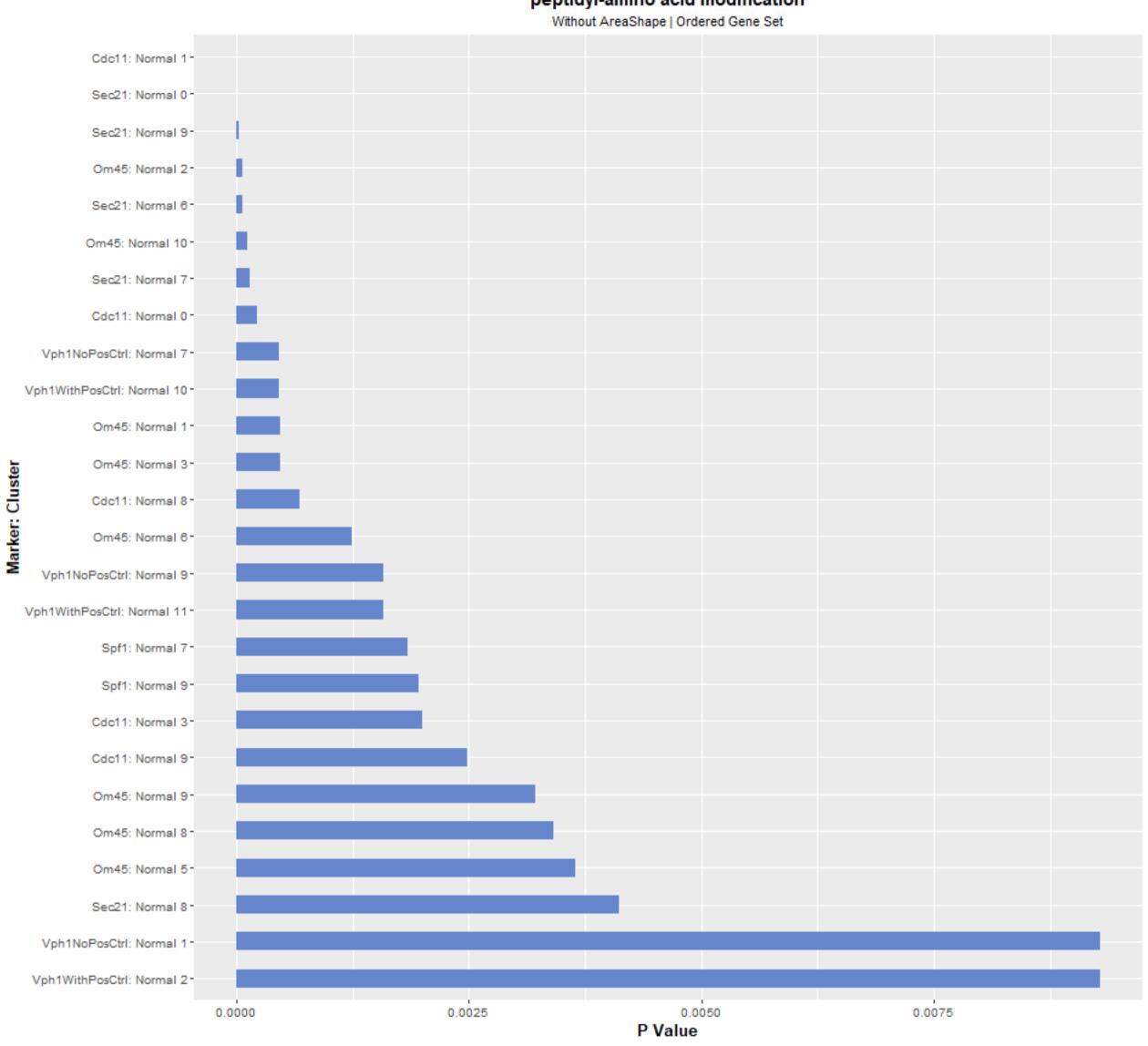
organelle fusion



organelle inheritance



peptidyl-amino acid modification



peroxisome organization Without AreaShape | Ordered Gene Set Om45: Normal 5-Marker: Cluster Cdc11: Normal 9 -

0.002

P Value

0.003

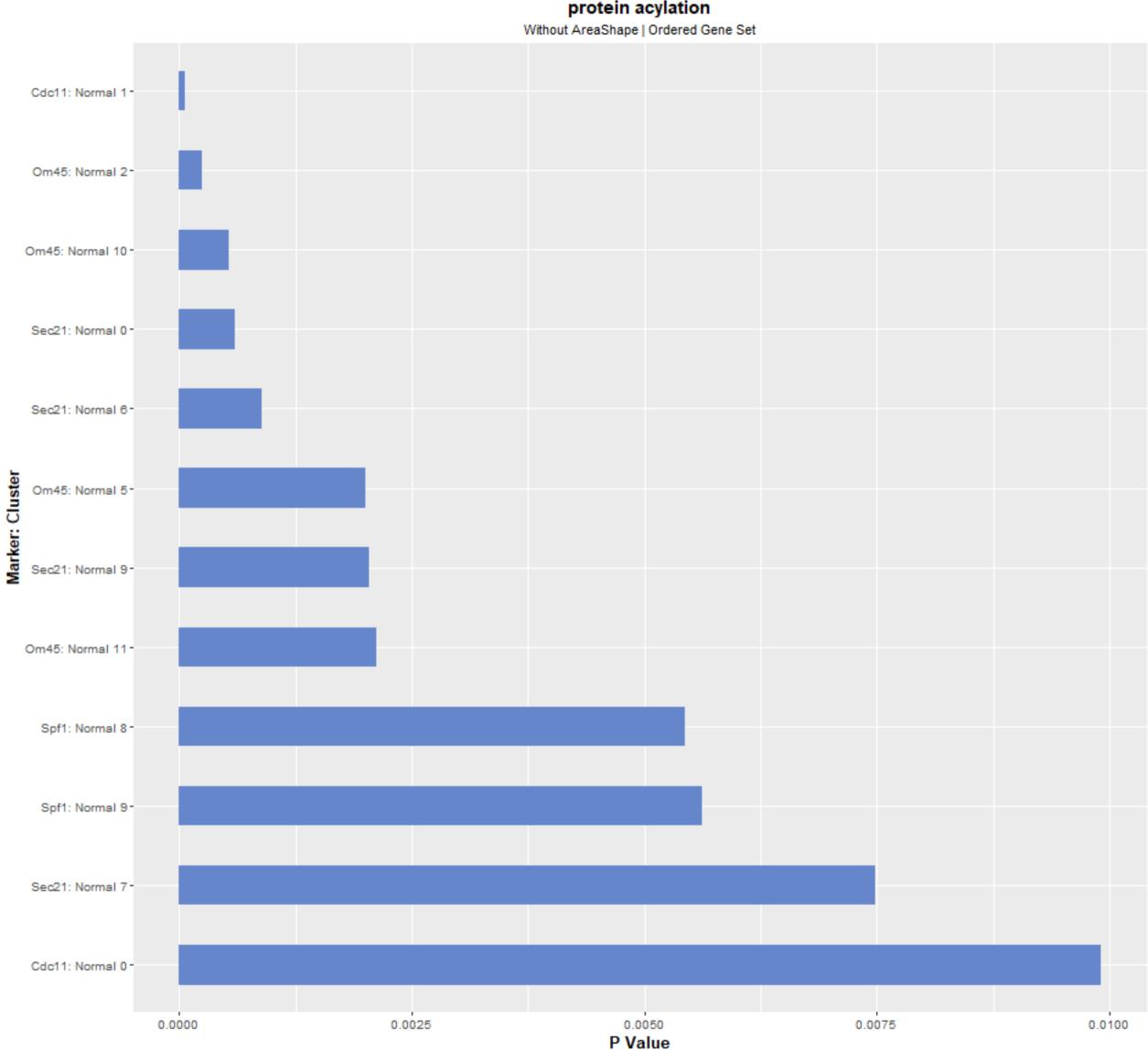
0.004

0.001

0.000

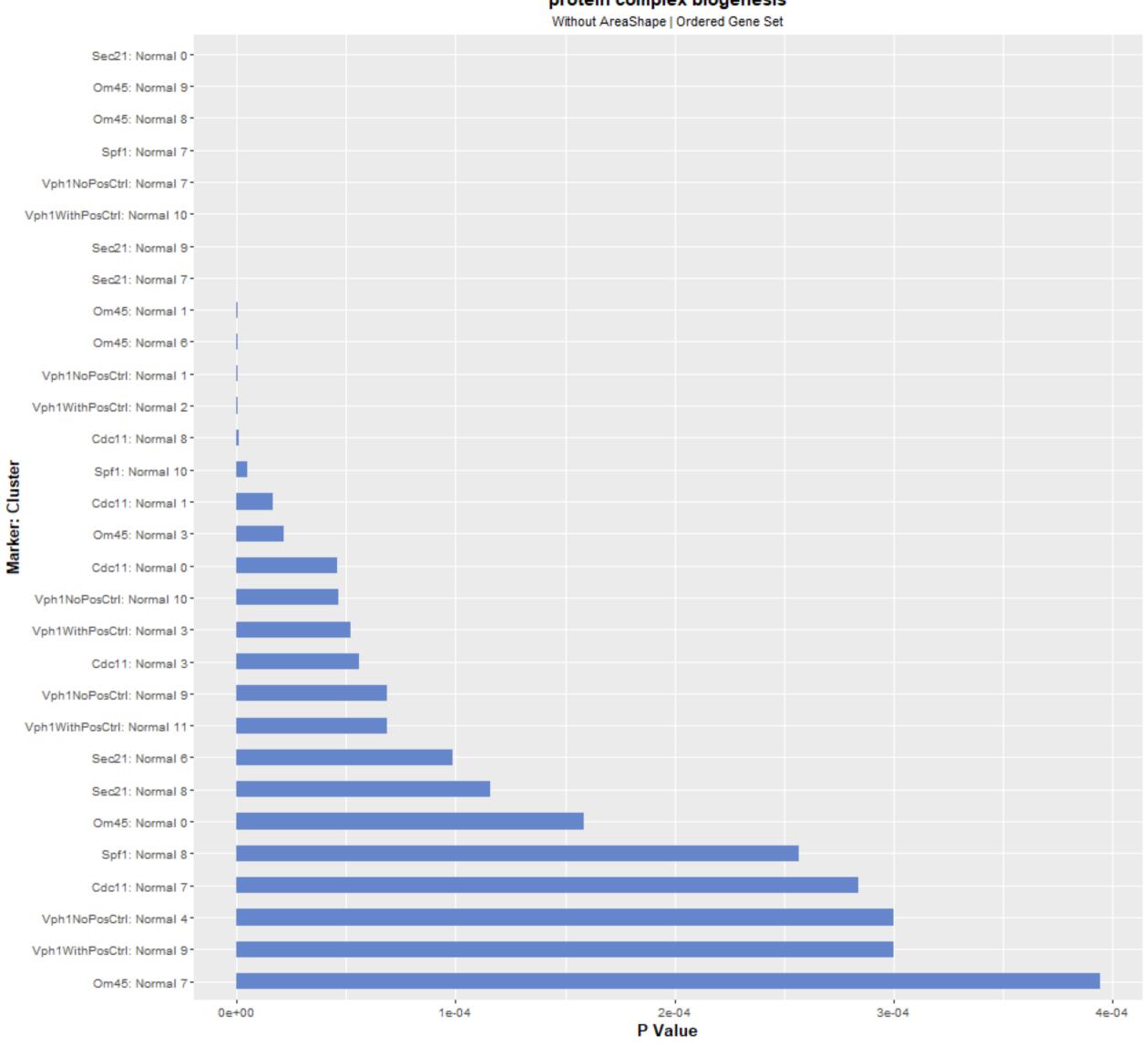
0.005

protein acylation



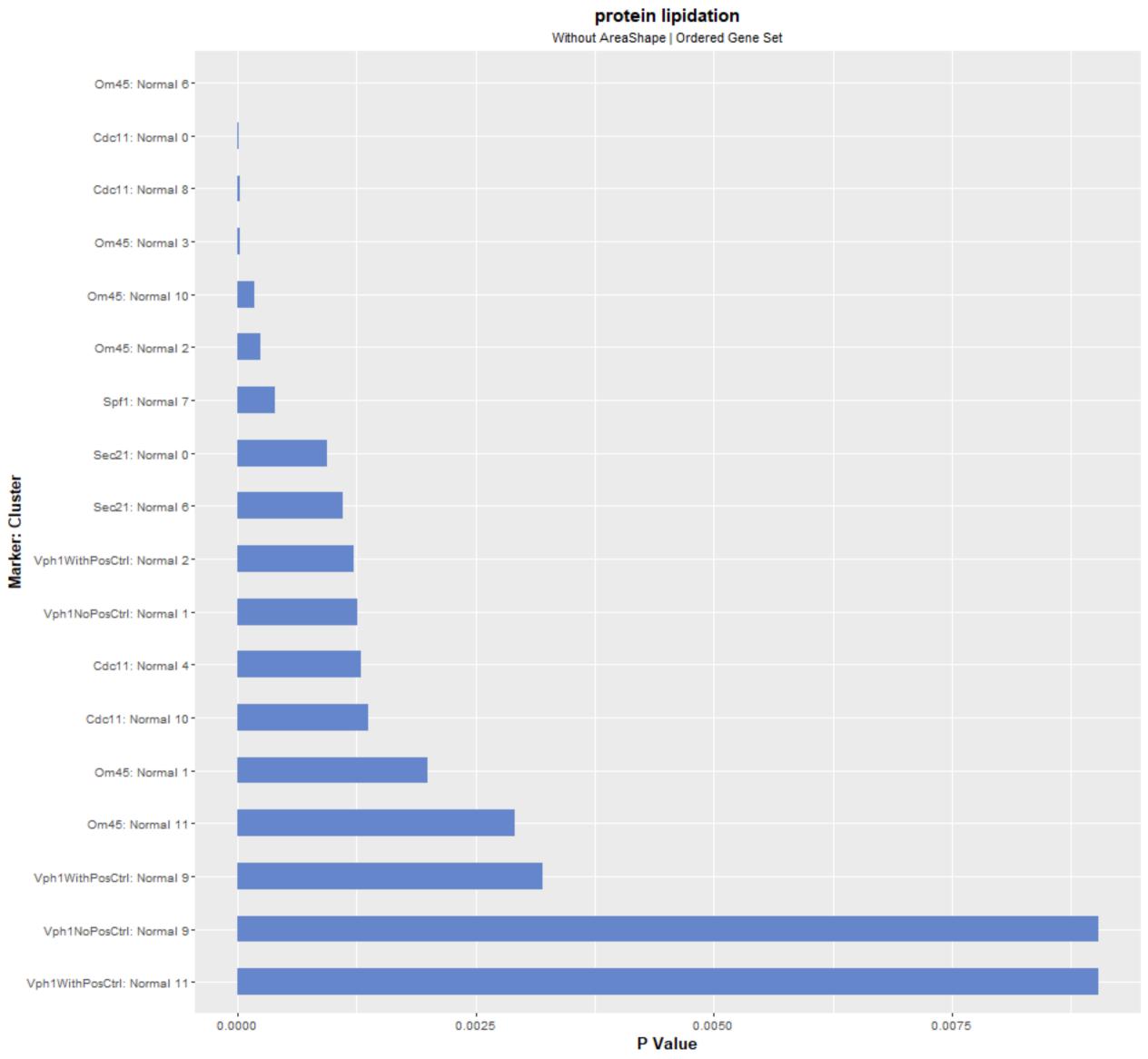
protein alkylation Without AreaShape | Ordered Gene Set Vph1NoPosCtrl: Normal 2 -Marker: Cluster Vph1WithPosCtrl: Normal 6 -0.002 0.004 0.006 0.000 P Value

protein complex biogenesis



protein dephosphorylation Without AreaShape | Ordered Gene Set Marker: Cluster: Cluster: Cloc11: Normal 11-2e-04 0e+00 1e-04 3e-04 4e-04 P Value

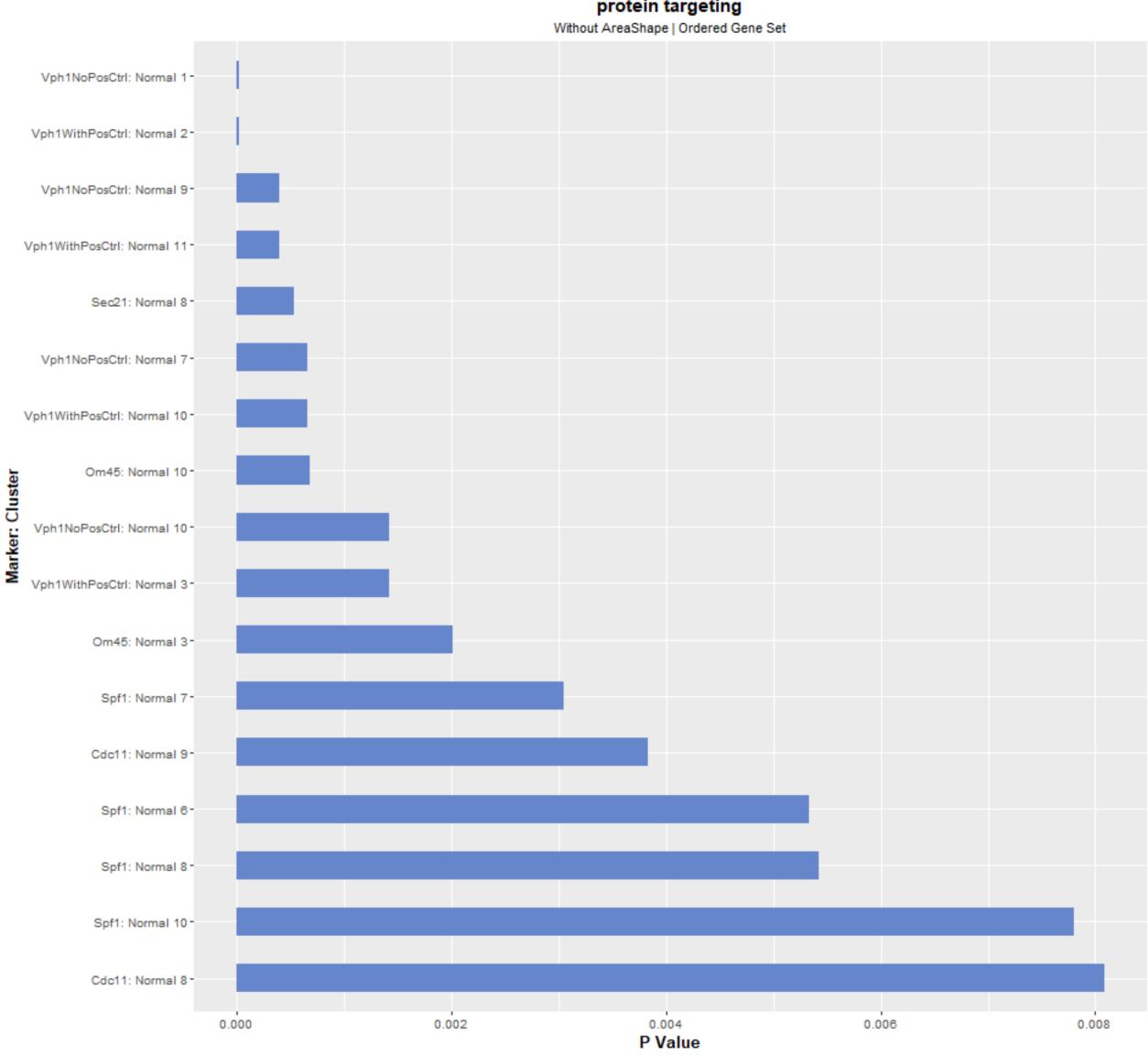
protein glycosylation Without AreaShape | Ordered Gene Set Cdc11: Normal 2-Marker: Cluster Cdc11: Normal 4-Vph1WithPosCtrl: Normal 0 -0.0100 0.0050 0.0025 0.0075 0.0000 P Value



protein modification by small protein conjugation or removal Without AreaShape | Ordered Gene Set Cdc11: Normal 1-Om45: Normal 91 Om45: Normal 8 -Sec21: Normal 8 -Om45: Normal 31 Om45: Normal 7 Cdc11: Normal 31 Marker: Cluster Sec21: Normal 9 -Vph1NoPosCtrl: Normal 10 -Vph1WithPosCtrl: Normal 3 Cdc11: Normal 5-Spf1: Normal 9 -Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Cdc11: Normal 9 -0.0050 0.0000 0.0025 0.0075 0.0100 P Value

protein phosphorylation Without AreaShape | Ordered Gene Set Cdc11: Normal 10 -Om45: Normal 8 -Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Om45: Normal 10 -Om45: Normal 9 -Marker: Cluster Om45: Normal 31 Cdc11: Normal 7 -Cdc11: Normal 111 Cdc11: Normal 9-Om45: Normal 7-Sec21: Normal 7 -Sec21: Normal 61 Sec21: Normal 8 -0.002 0.000 0.004 P Value

protein targeting



proteolysis involved in cellular protein catabolic process Without AreaShape | Ordered Gene Set

0.004

0.002

P Value

Om45: Normal 9-

Om45: Normal 8 -

Spf1: Normal 10 -

Om45: Normal 1-

Om45: Normal 7 -

Spf1: Normal 8 -

Spf1: Normal 7 -

Marker: Cluster: Cluster: Claster: Cdc11: Normal 1 -

Cdc11: Normal 3

Om45: Normal 6-

Spf1: Normal 51

Om45: Normal 0 -

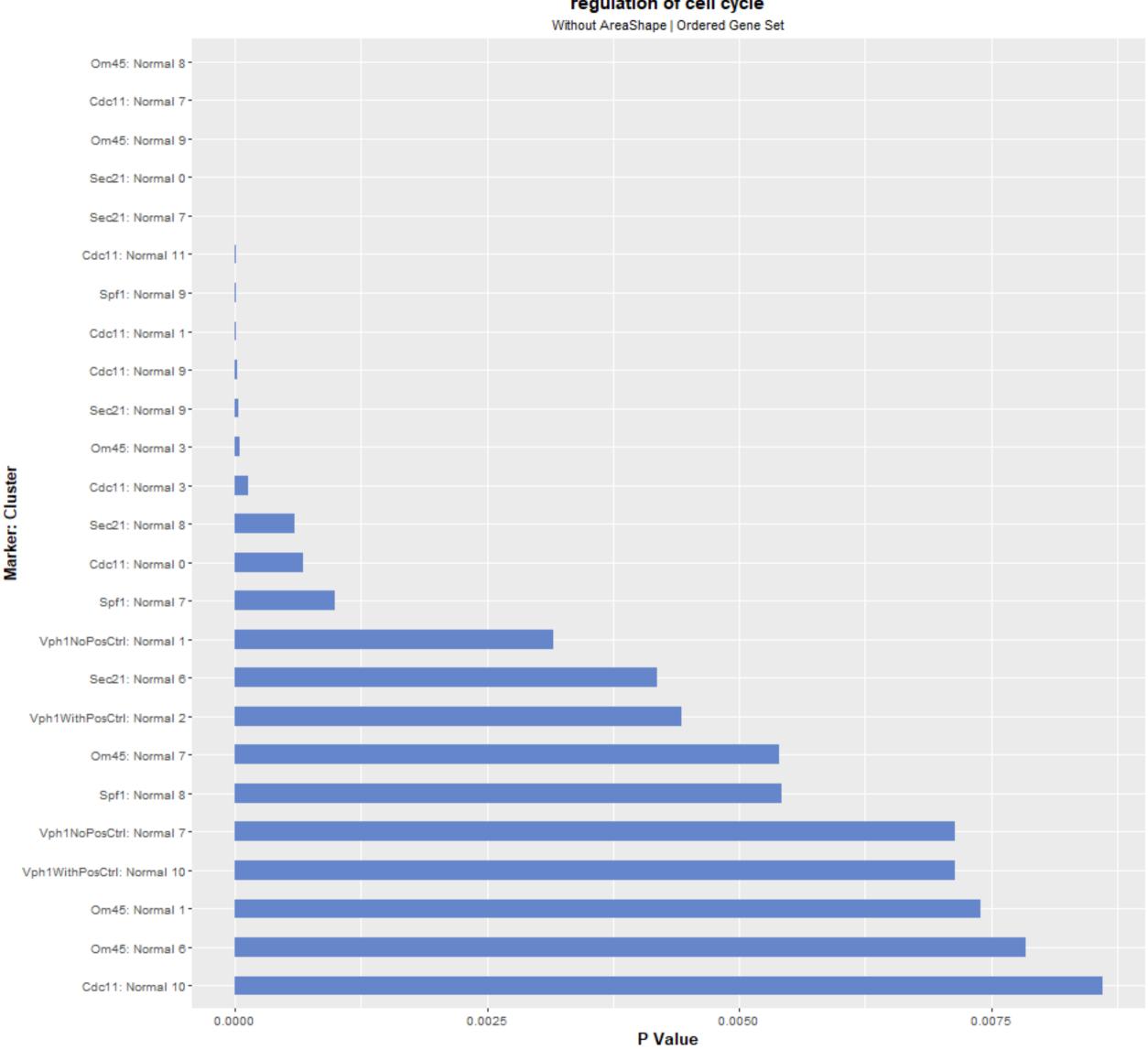
Sec21: Normal 5 -

Sec21: Normal 91

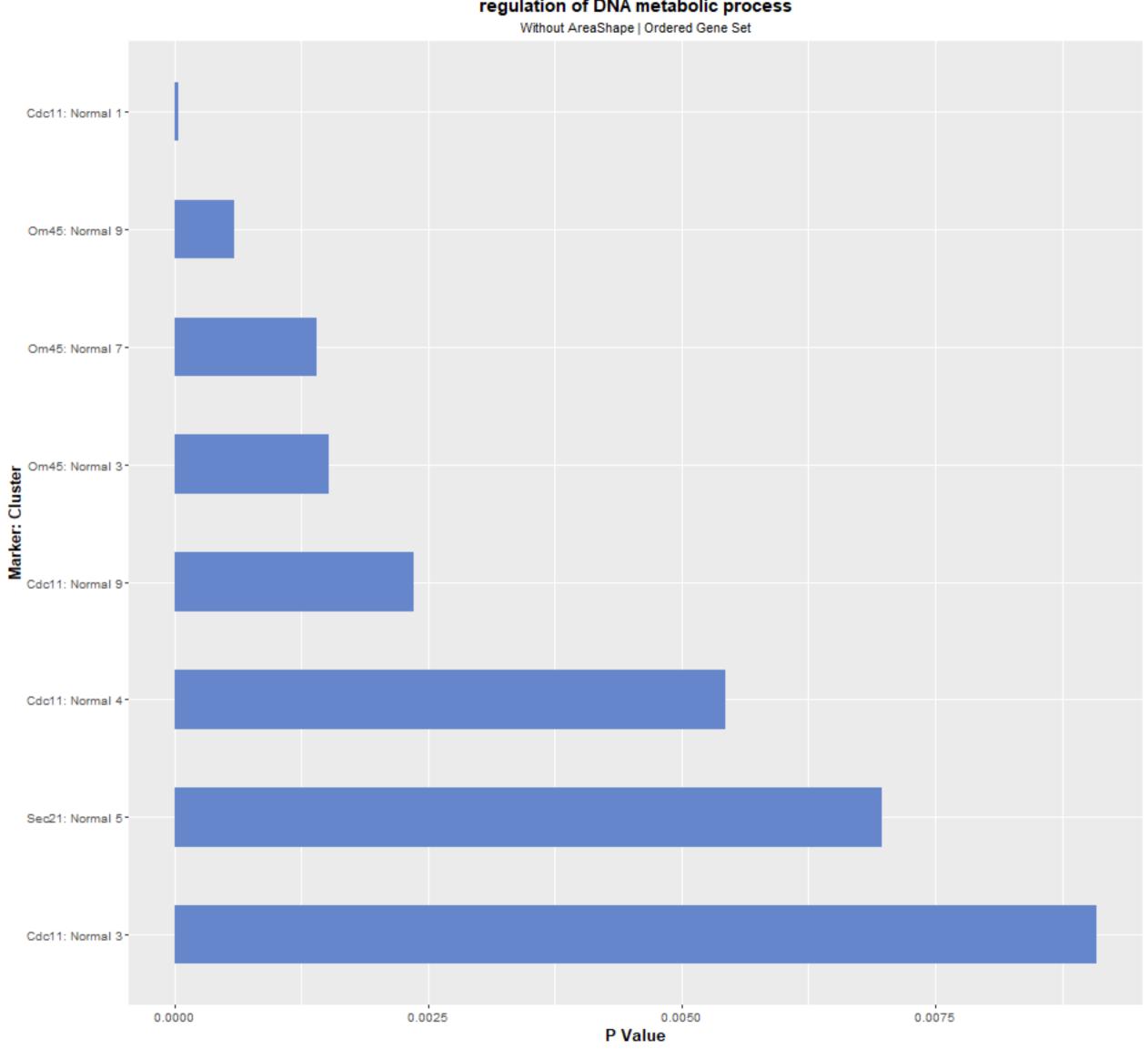
Spf1: Normal 6-

0.000

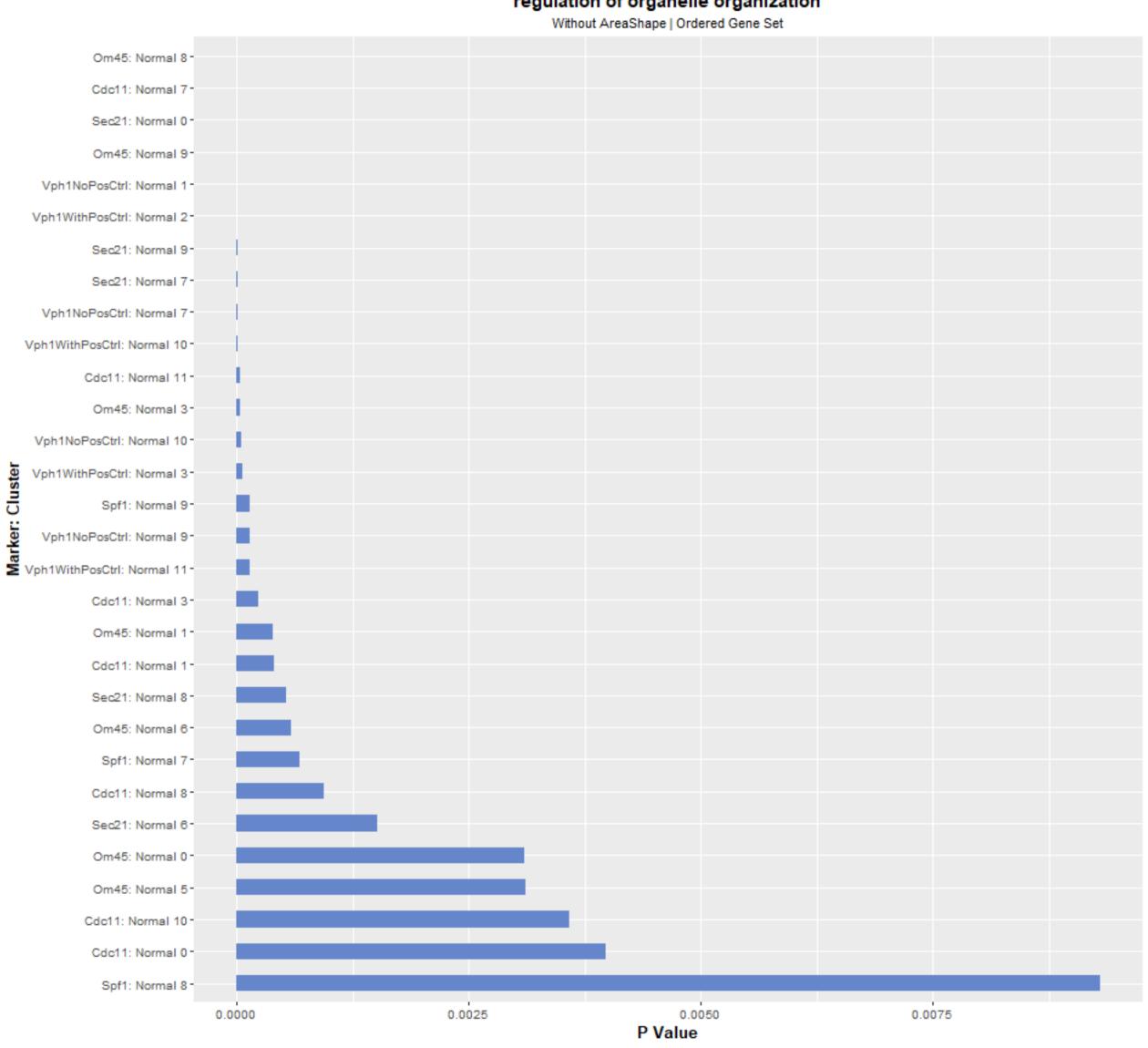
regulation of cell cycle



regulation of DNA metabolic process



regulation of organelle organization



regulation of protein modification process Without AreaShape | Ordered Gene Set Cdc11: Normal 1-Sec21: Normal 7-Om45: Normal 9 -Om45: Normal 7-Sec21: Normal 8 -Vph1NoPosCtrl: Normal 9 -Vph1WithPosCtrl: Normal 11 Marker: Cluster Spf1: Normal 9-Cdc11: Normal 41 Cdc11: Normal 9 -Spf1: Normal 5-Sec21: Normal 0 -Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Cdc11: Normal 31 Om45: Normal 8 -0.004 0.000 0.002 0.006 0.008 P Value

regulation of transport Without AreaShape | Ordered Gene Set Vph1NoPosCtrl: Normal 10 -Vph1WithPosCtrl: Normal 3 -Om45: Normal 10 -Cdc11: Normal 8 -Marker: Cluster Om45: Normal 5 Vph1NoPosCtrl: Normal 7 -Vph1WithPosCtrl: Normal 10 -Vph1NoPosCtrl: Normal 1 -Vph1WithPosCtrl: Normal 2 -

0.004

P Value

0.006

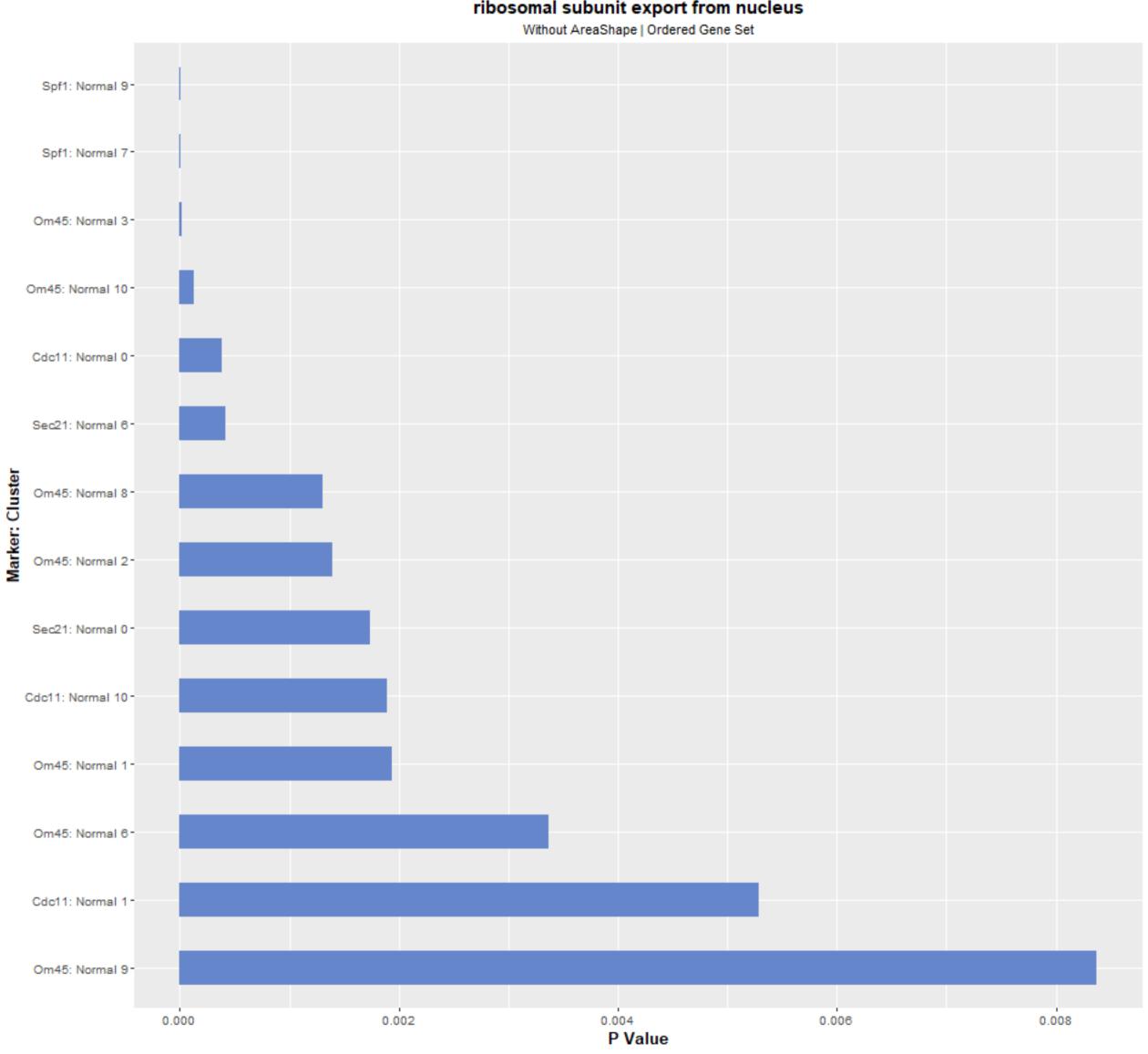
0.008

0.000

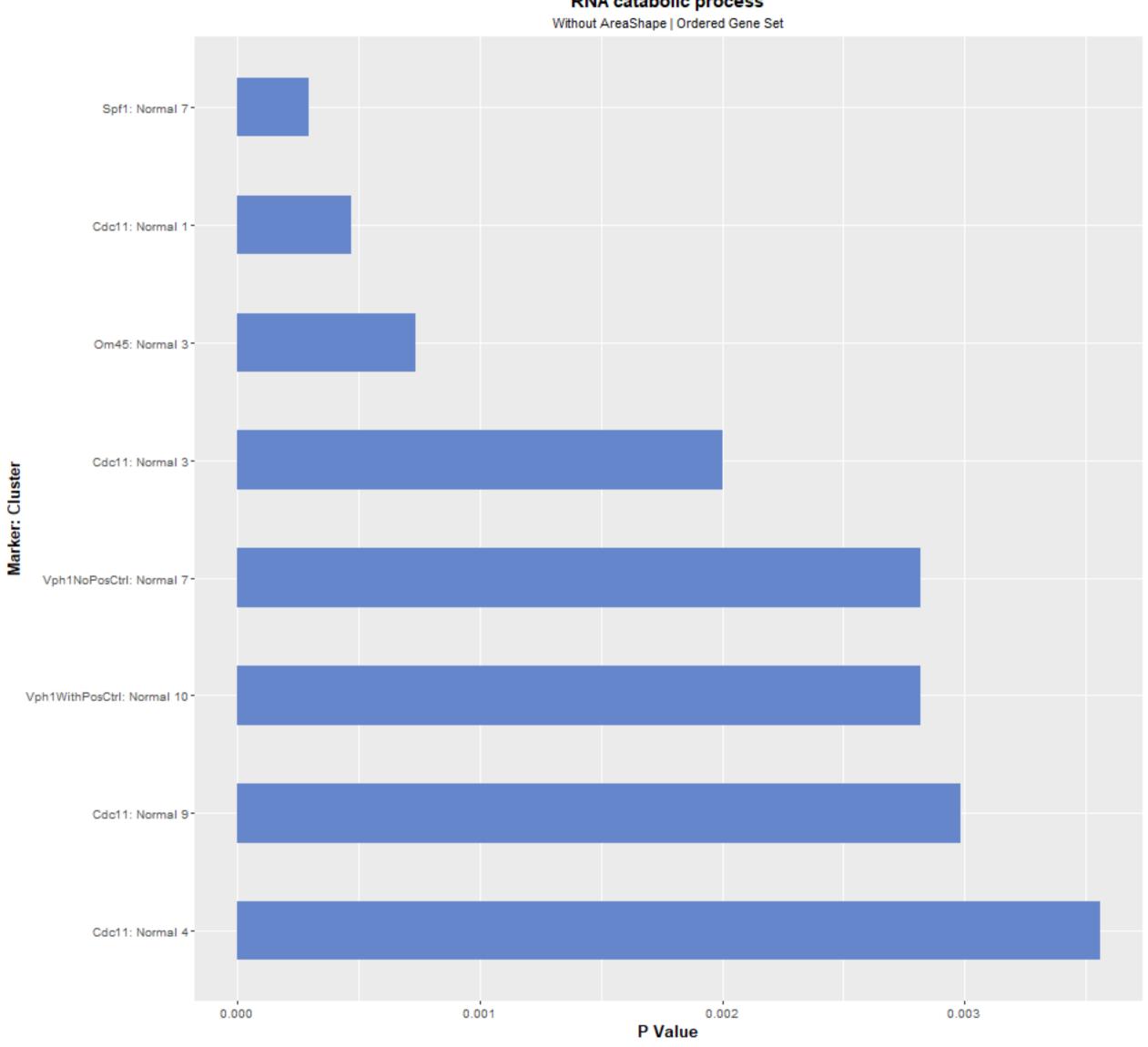
0.002

response to heat Without AreaShape | Ordered Gene Set Marker: Cluster: Coc11: Normal 5-0.002 0.001 0.003 0.000 0.004 0.005 P Value

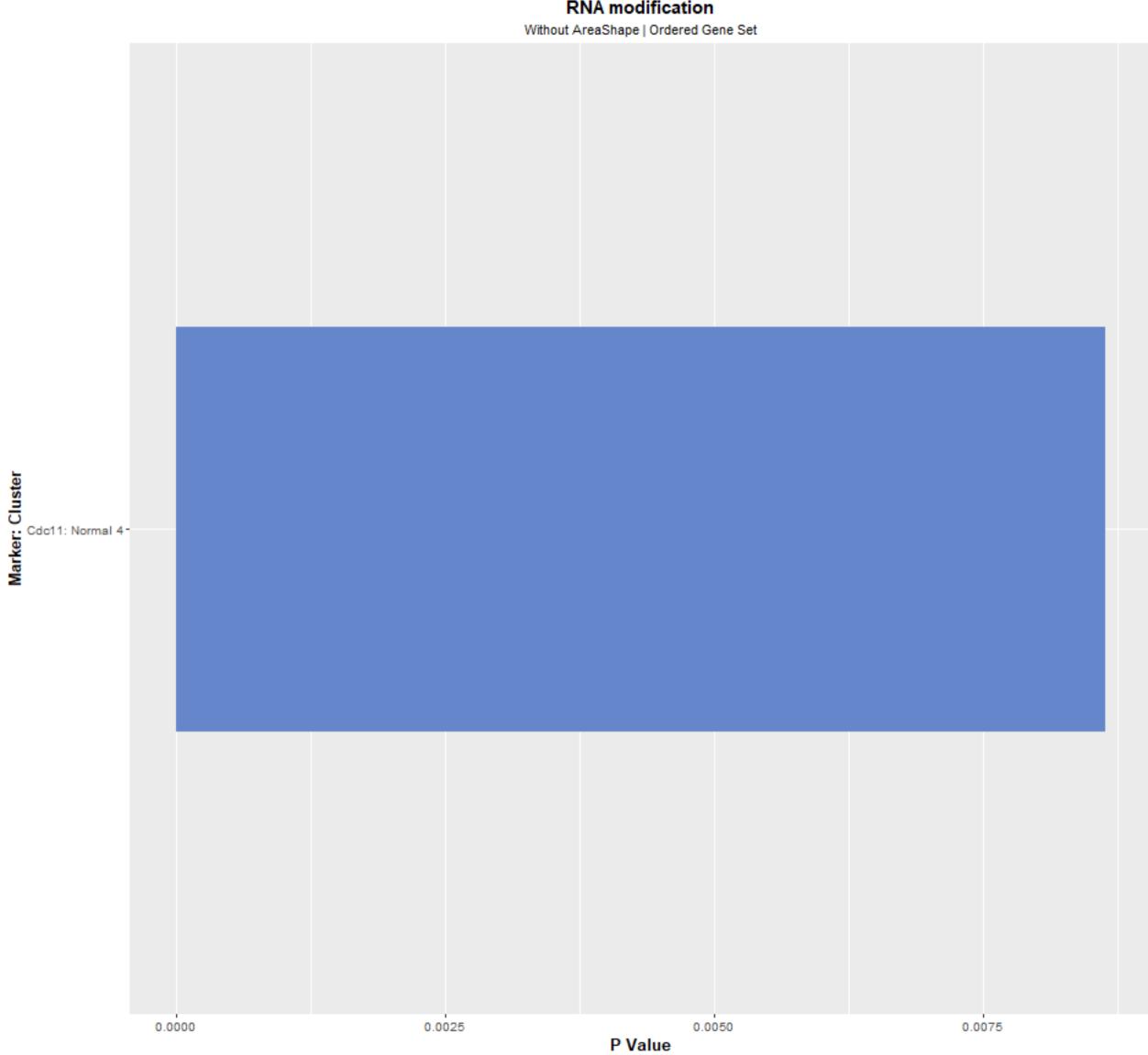
ribosomal subunit export from nucleus



RNA catabolic process



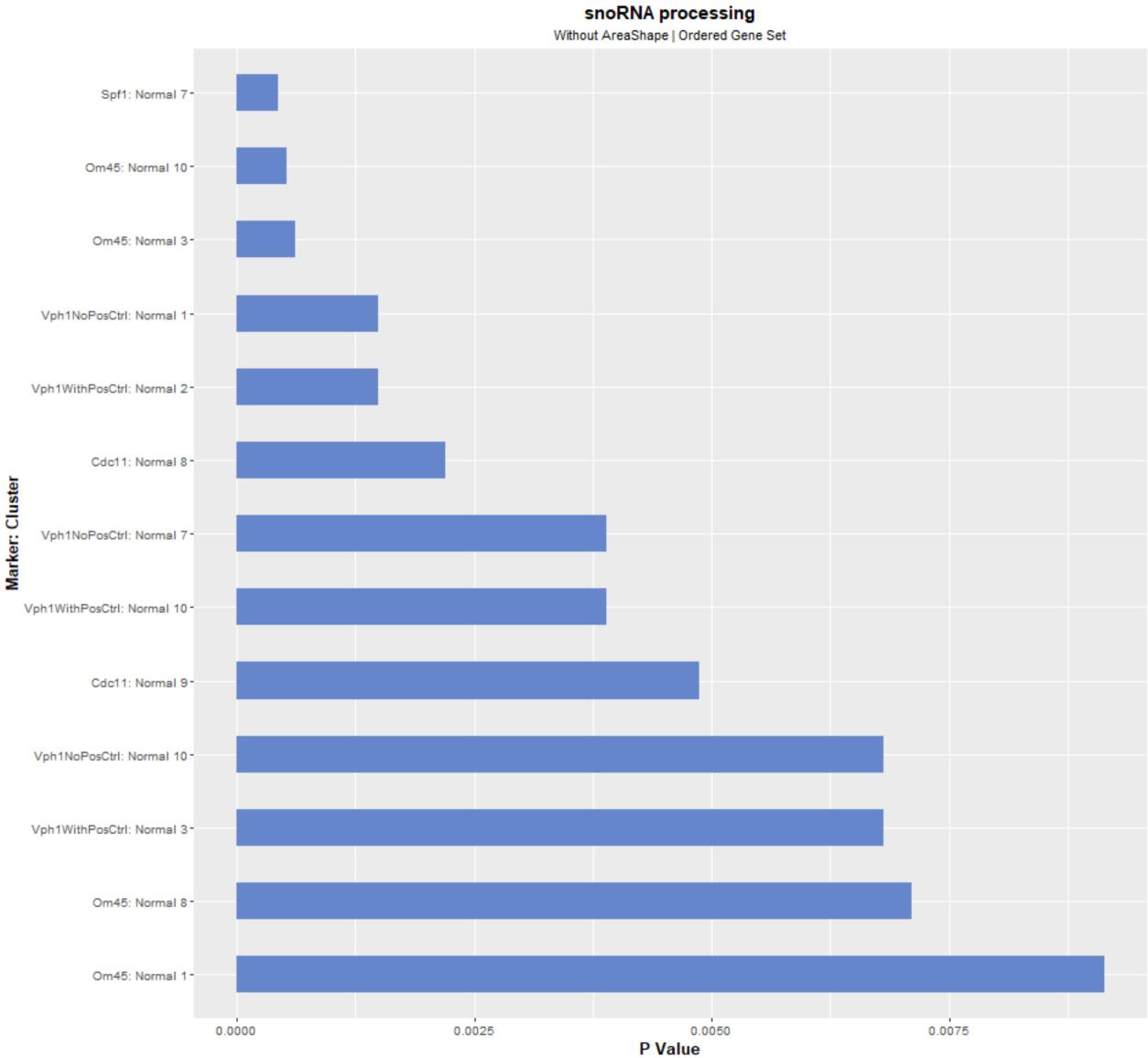
RNA modification



Without AreaShape | Ordered Gene Set Om45: Normal 8 -Sec21: Normal 8 -Om45: Normal 9-Sec21: Normal 7 -Om45: Normal 1-Spf1: Normal 9 -Cdc11: Normal 1 -Spf1: Normal 7-Cdc11: Normal 0 -Marker: Cluster Cdc11: Normal 8 -Cdc11: Normal 9-Sec21: Normal 9-Sec21: Normal 61 Om45: Normal 31 Sec21: Normal 0 -Om45: Normal 61 Spf1: Normal 8 -Sec21: Normal 41 Vph1NoPosCtrl: Normal 1 -Vph1WithPosCtrl: Normal 2-Om45: Normal 0 -0.002 0.000 0.001 0.003 0.004 P Value

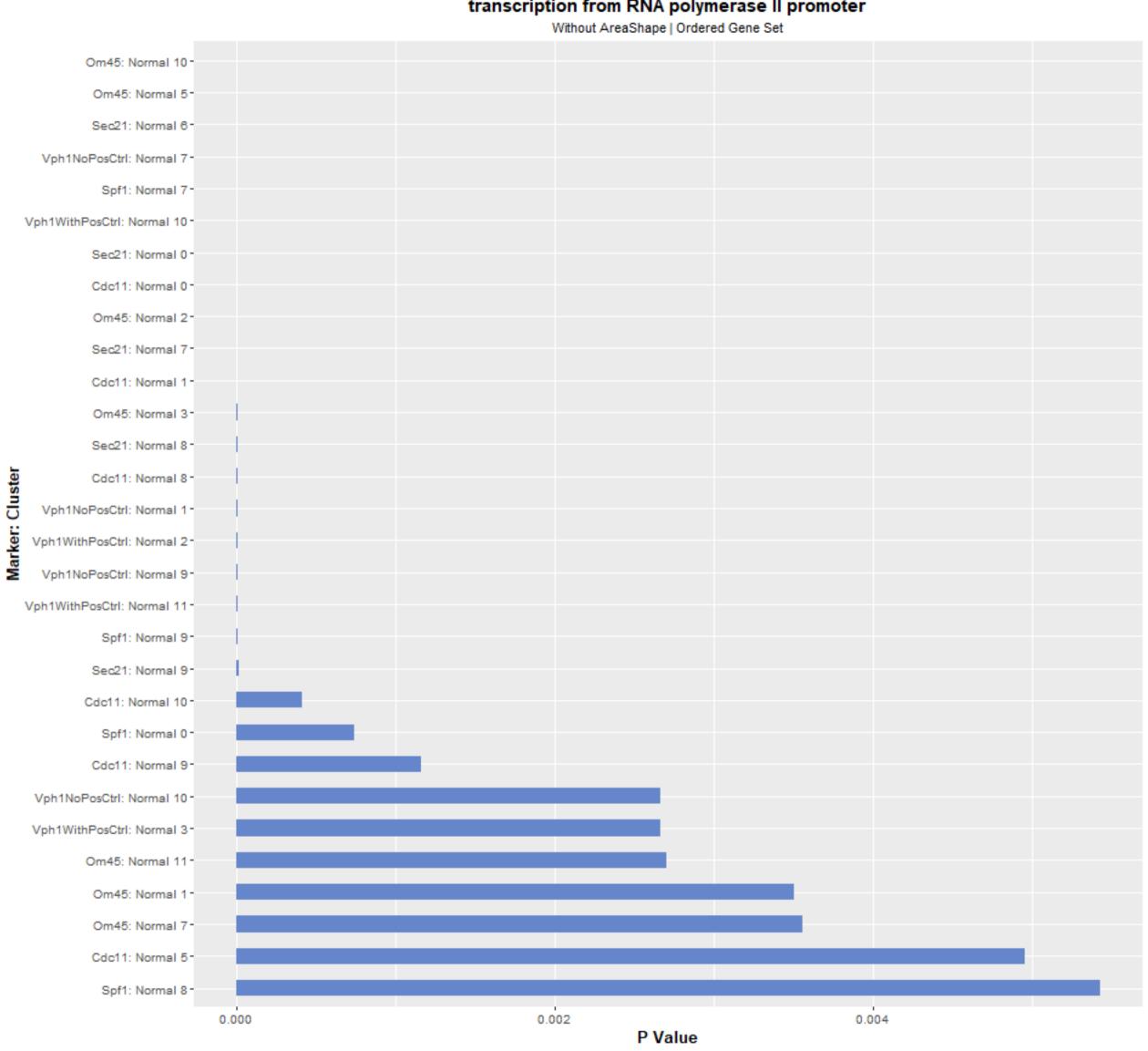
RNA splicing

signaling Without AreaShape | Ordered Gene Set Cdc11: Normal 9 -Marker: Cluster Spf1: Normal 7 -0.002 0.001 0.000 0.003 0.004 0.005 P Value



telomere organization Without AreaShape | Ordered Gene Set Cdc11: Normal 1 -Marker: Cluster - 6 Ismook :9-Om45: Normal 31 0.0050 0.0000 0.0025 0.0075 0.0100 P Value

transcription from RNA polymerase II promoter

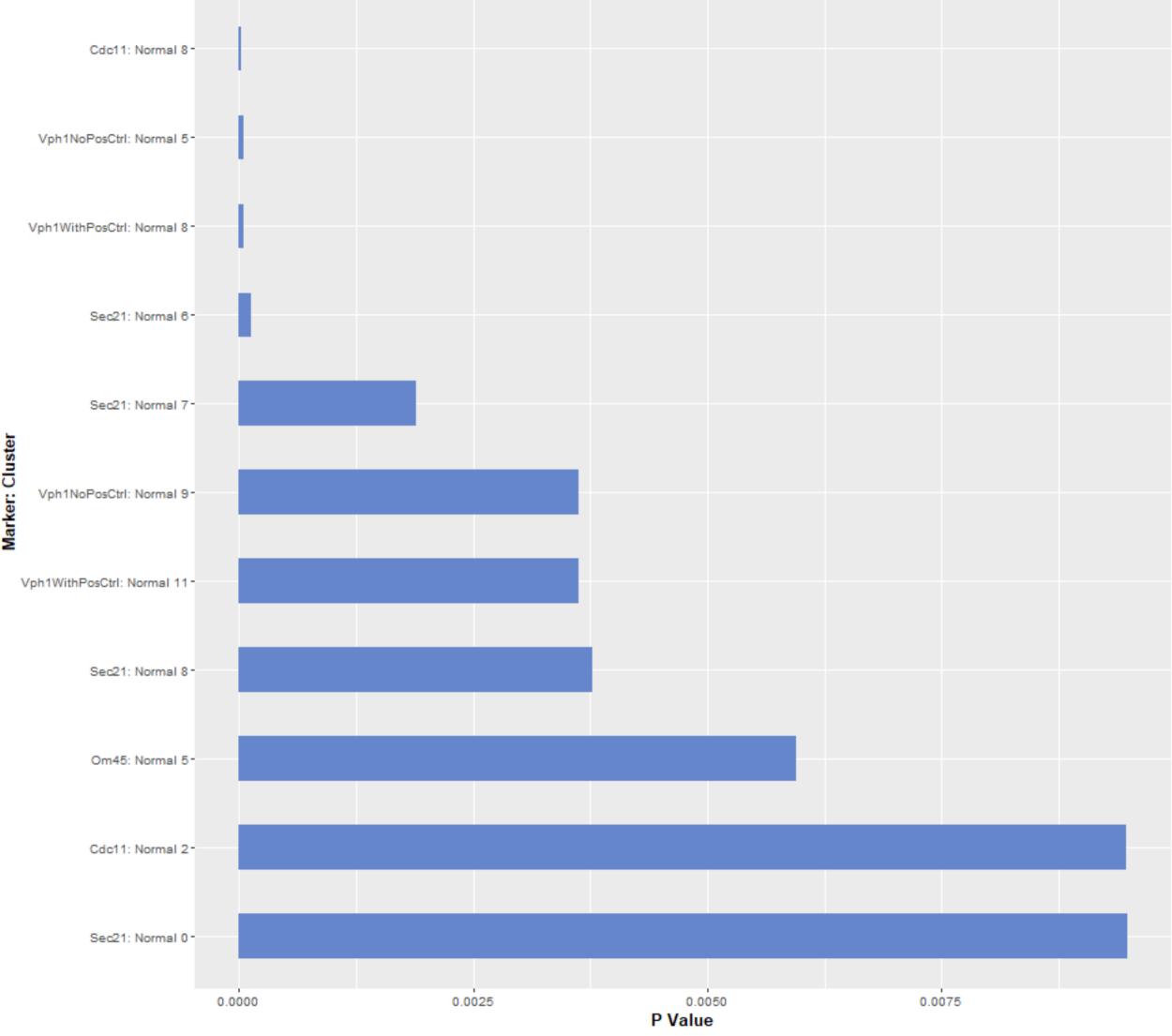


translational initiation Without AreaShape | Ordered Gene Set Vph1NoPosCtrl: Normal 9 -Vph1WithPosCtrl: Normal 11 -Marker: Cluster Om45: Normal 10 -Om45: Normal 31 0.001 0.002 0.004 0.000 0.003 P Value

transposition Without AreaShape | Ordered Gene Set Cdc11: Normal 1-Vph1NoPosCtrl: Normal 7 Marker: Cluster Vph1WithPosCtrl: Normal 10 -Spf1: Normal 1 -0.0050 0.0025 0.0075 0.0000 P Value

tRNA aminoacylation for protein translation Without AreaShape | Ordered Gene Set Vph1NoPosCtrl: Normal 9 -Vph1WithPosCtrl: Normal 11 Om45: Normal 6-Marker: Cluster Vph1WithPosCtrl: Normal 2 -Vph1NoPosCtrl: Normal 1 -Om45: Normal 8 -0.000 0.002 0.004 0.006 P Value

vacuole organization Without AreaShape | Ordered Gene Set Cdc11: Normal 8 -Vph1NoPosCtrl: Normal 5 -Vph1WithPosCtrl: Normal 8 -Sec21: Normal 6-Sec21: Normal 7 -Marker: Cluster Vph1NoPosCtrl: Normal 9 -Vph1WithPosCtrl: Normal 11 Sec21: Normal 8 -Om45: Normal 5-



vesicle organization

