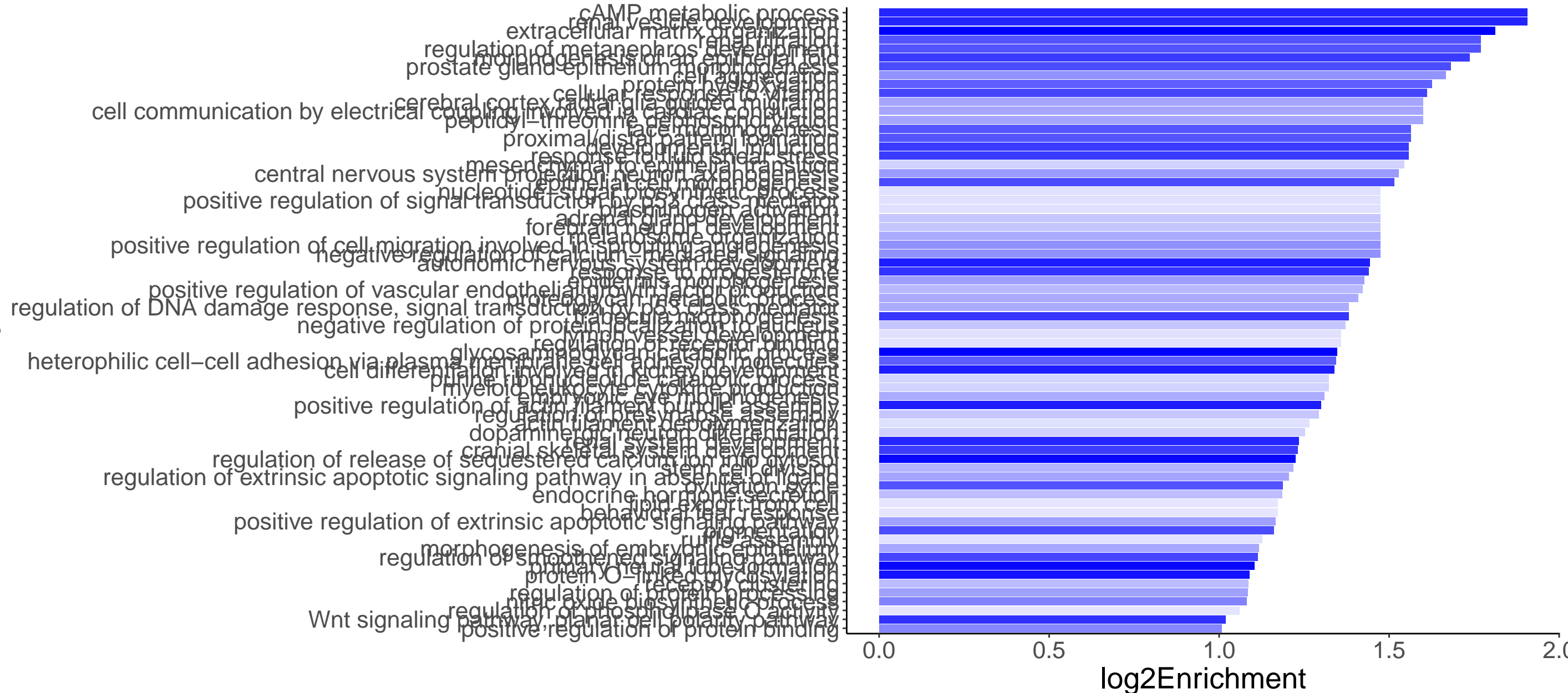


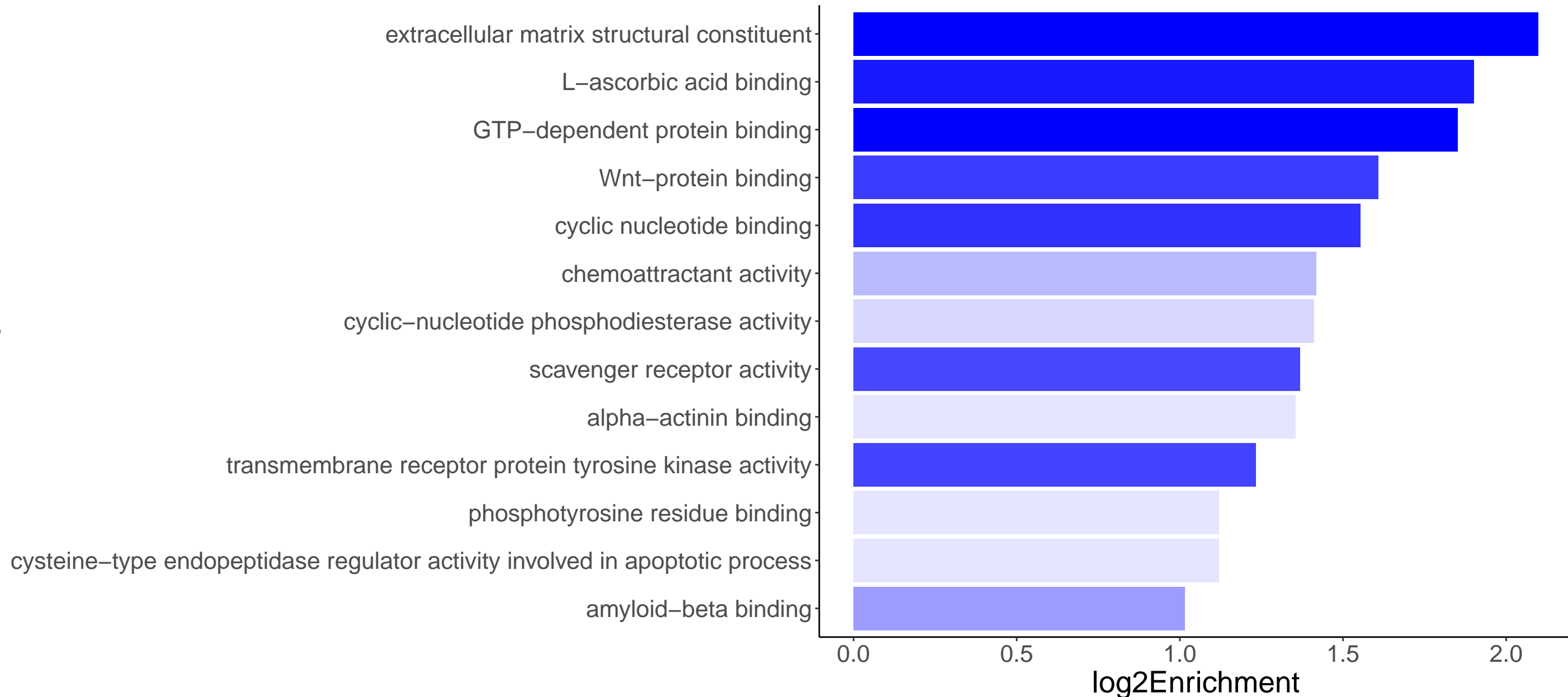
Original module 9 BP enrichment

Term



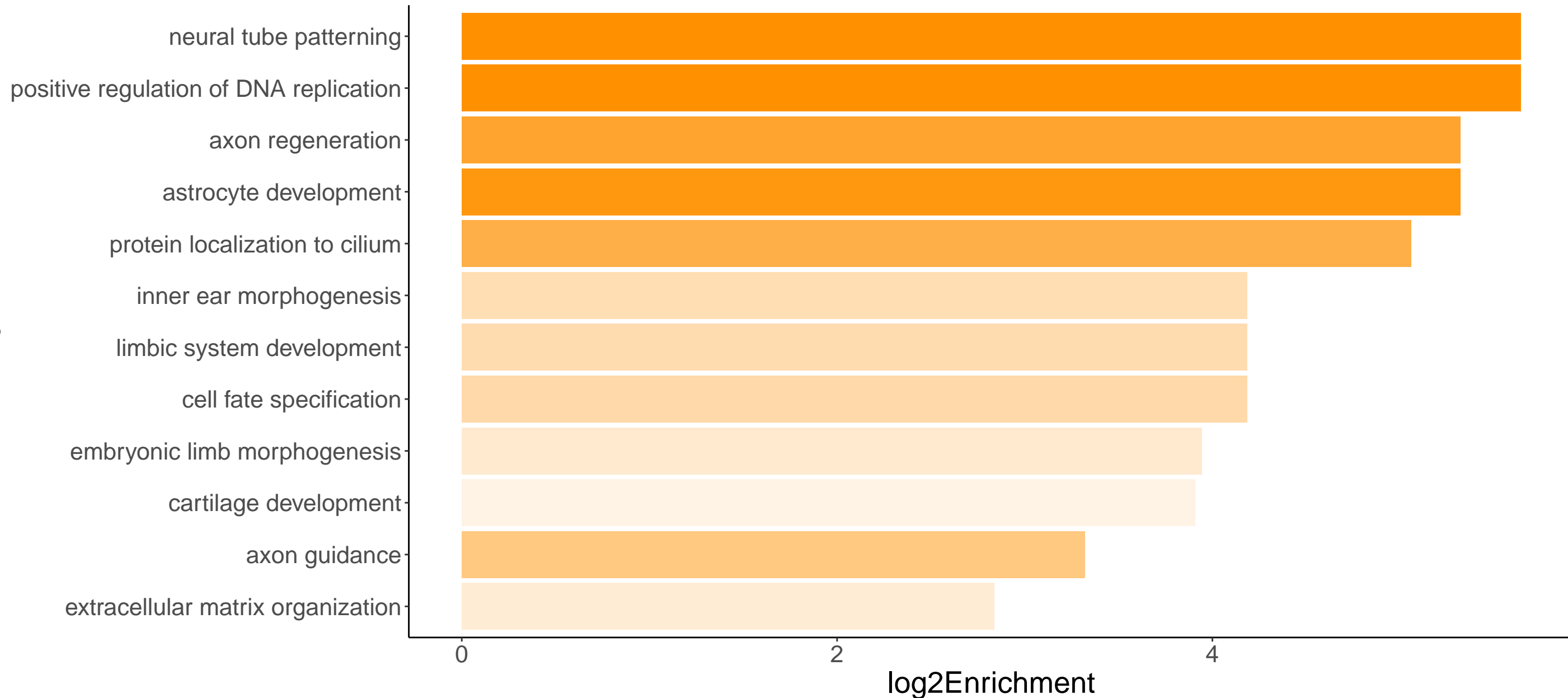
Original module 9 MF enrichment

Term



Re-clustered module 9.1.1 BP enrichment

Term



Re-clustered module 9.1.1 MF enrichment

Term

growth factor binding

0

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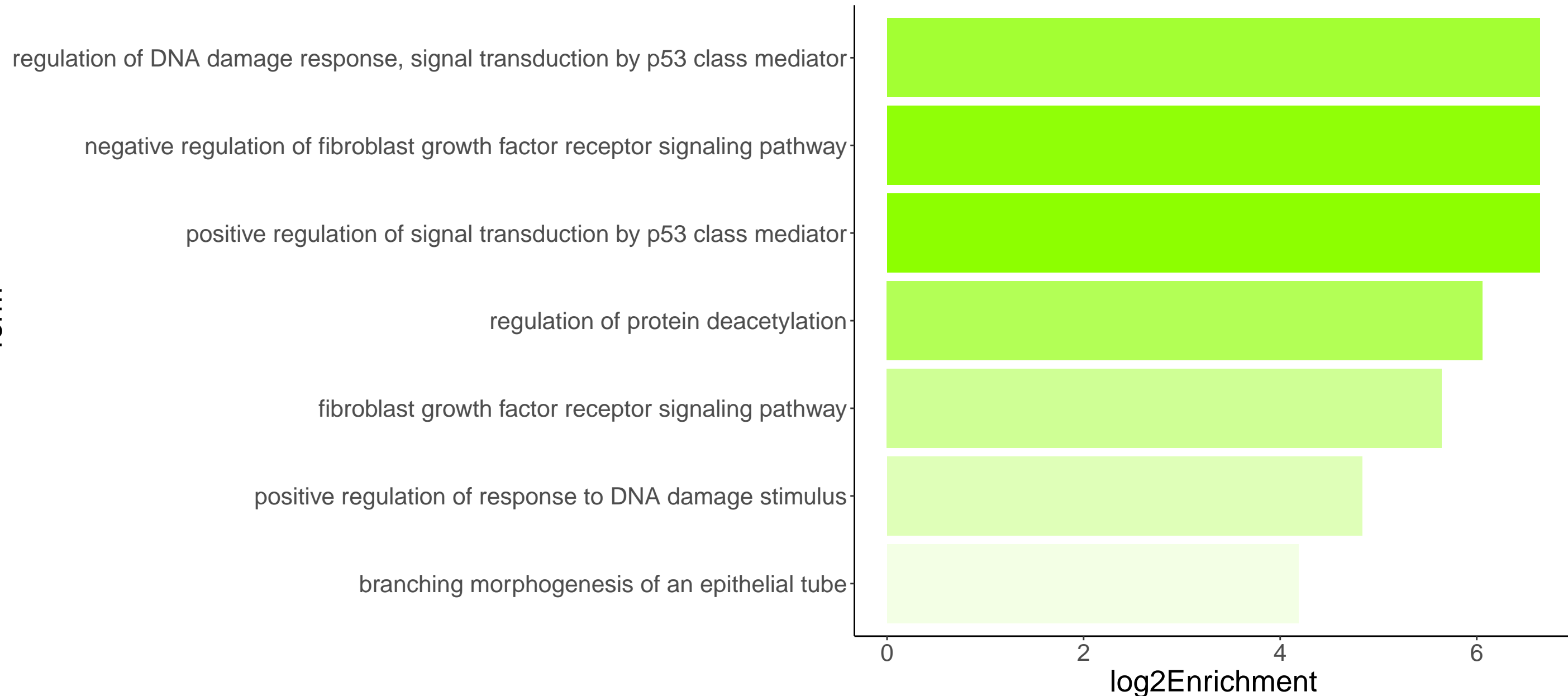
4

log2Enrichment



Re-clustered module 9.1.12 BP enrichment

Term



Re-clustered module 9.1.12 MF enrichment

Term

protein kinase binding

DNA-binding transcription activator activity, RNA polymerase II-specific

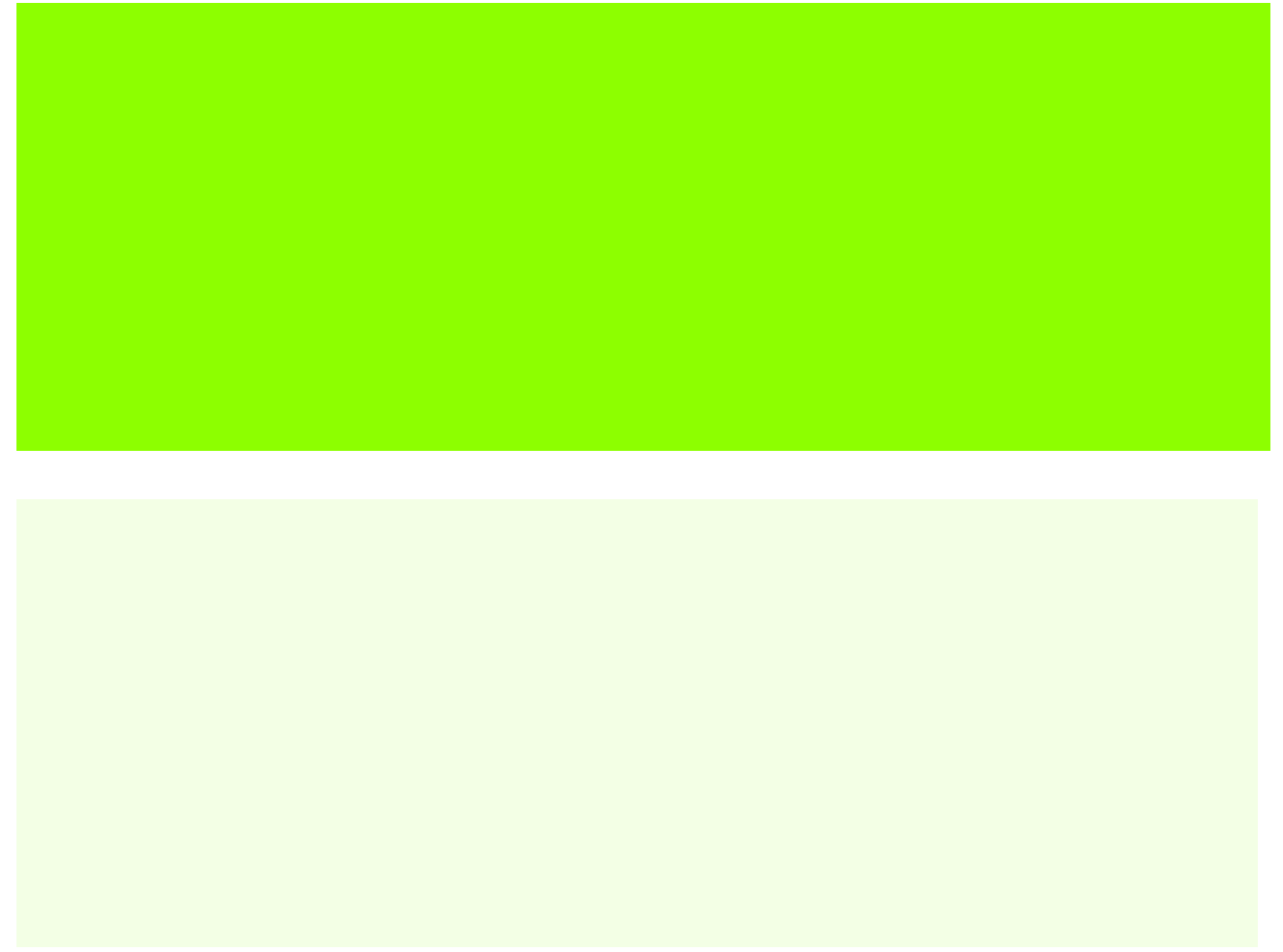
0

1

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3

log2Enrichment



Re-clustered module 9.1.2 BP enrichment

Term

positive regulation of extrinsic apoptotic signaling pathway

response to lipopolysaccharide

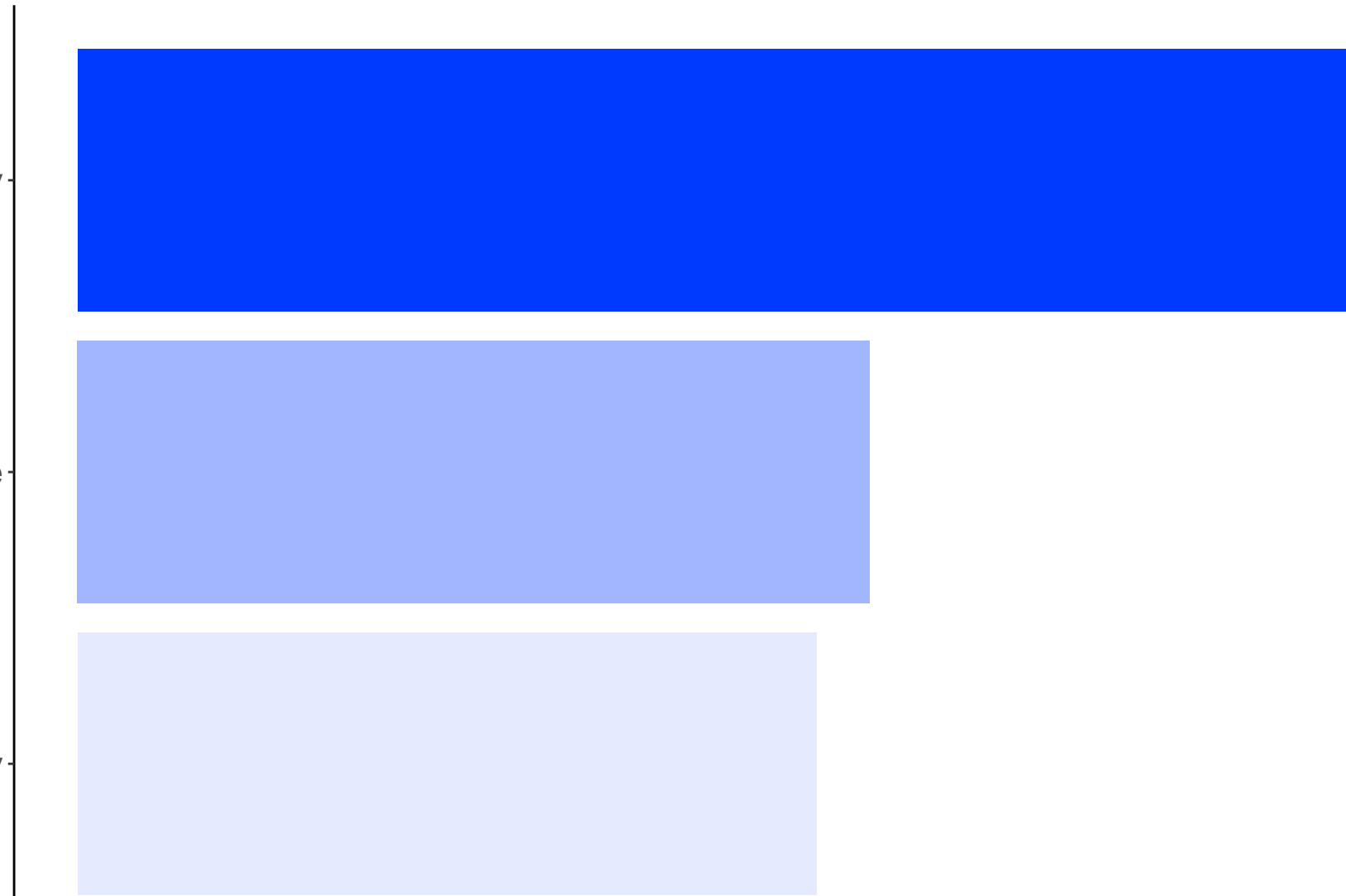
positive regulation of GTPase activity

0

2

4

log2Enrichment



Re-clustered module 9.1.2 MF enrichment

Term

log2Enrichment



Re-clustered module 9.1.3 BP enrichment

Term

log2Enrichment



Re-clustered module 9.1.3 MF enrichment

Term

metal ion binding

0.0

0.5

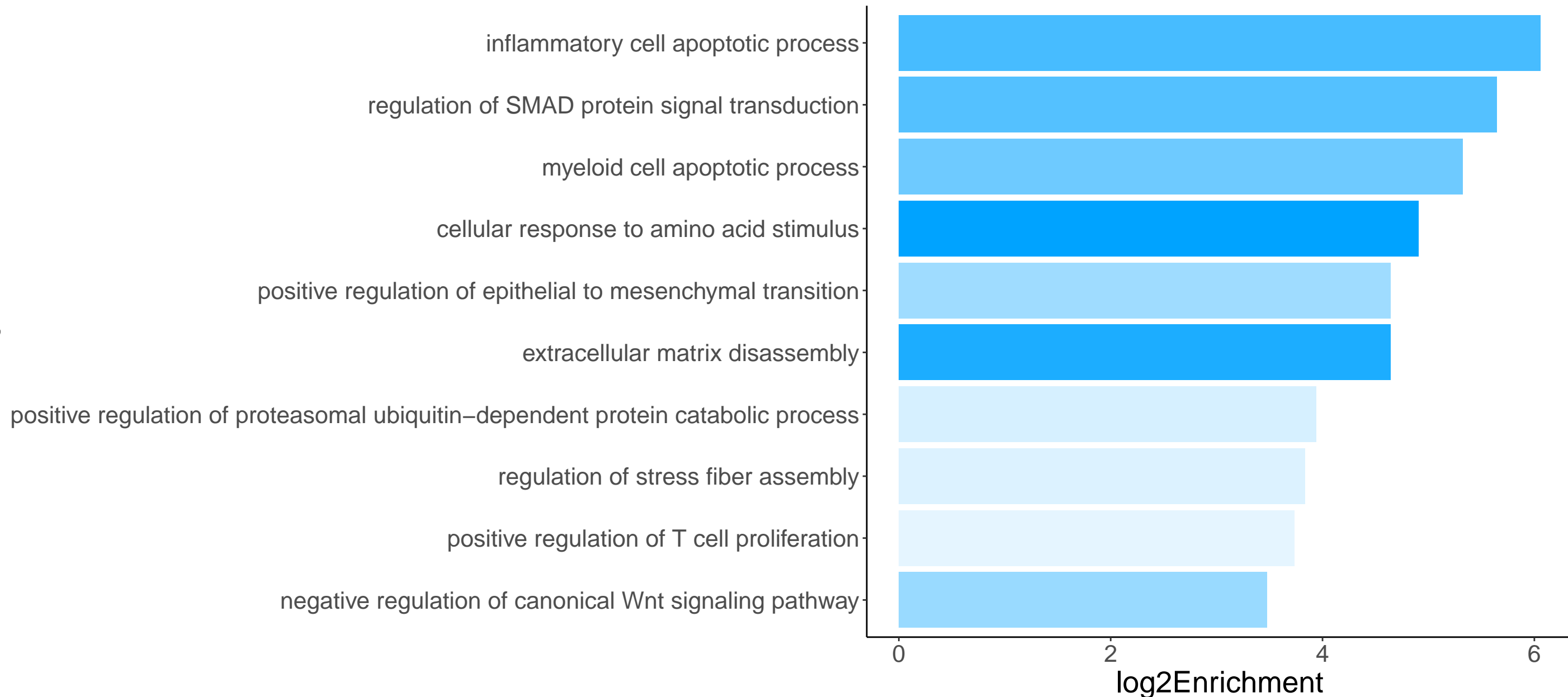
1.0

log2Enrichment



Re-clustered module 9.1.4 BP enrichment

Term



Re-clustered module 9.1.4 MF enrichment

Term

SH2 domain binding

0

1

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log2Enrichment



Re-clustered module 9.1.6 BP enrichment

Term

toxin transport

integrin-mediated signaling pathway

regulation of signaling receptor activity

regulation of Ras protein signal transduction

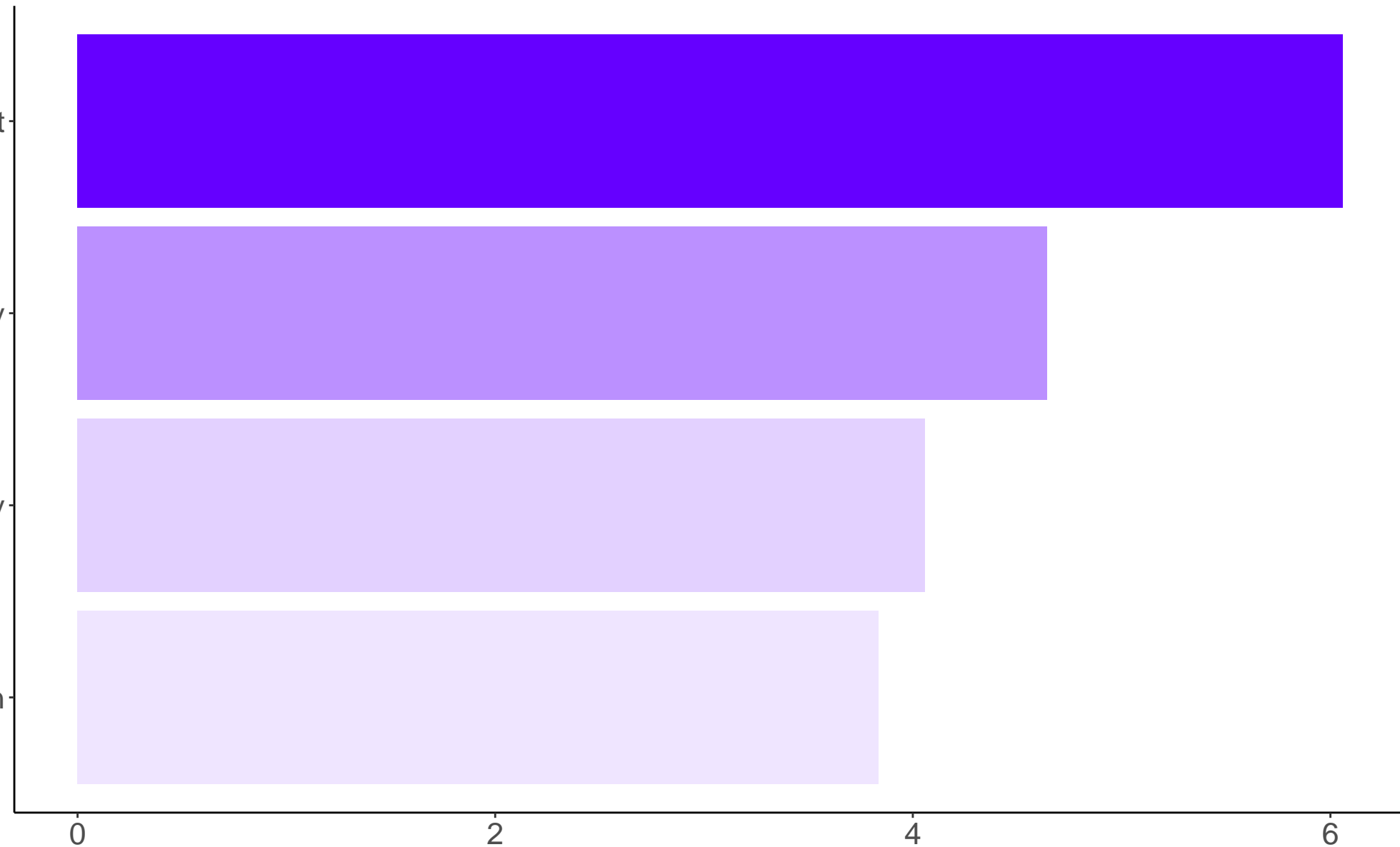
0

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log2Enrichment



Re-clustered module 9.1.6 MF enrichment

Term

endopeptidase inhibitor activity

0

1

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log2Enrichment



Re-clustered module 9.1.7 BP enrichment

Term

steroid hormone biosynthetic process

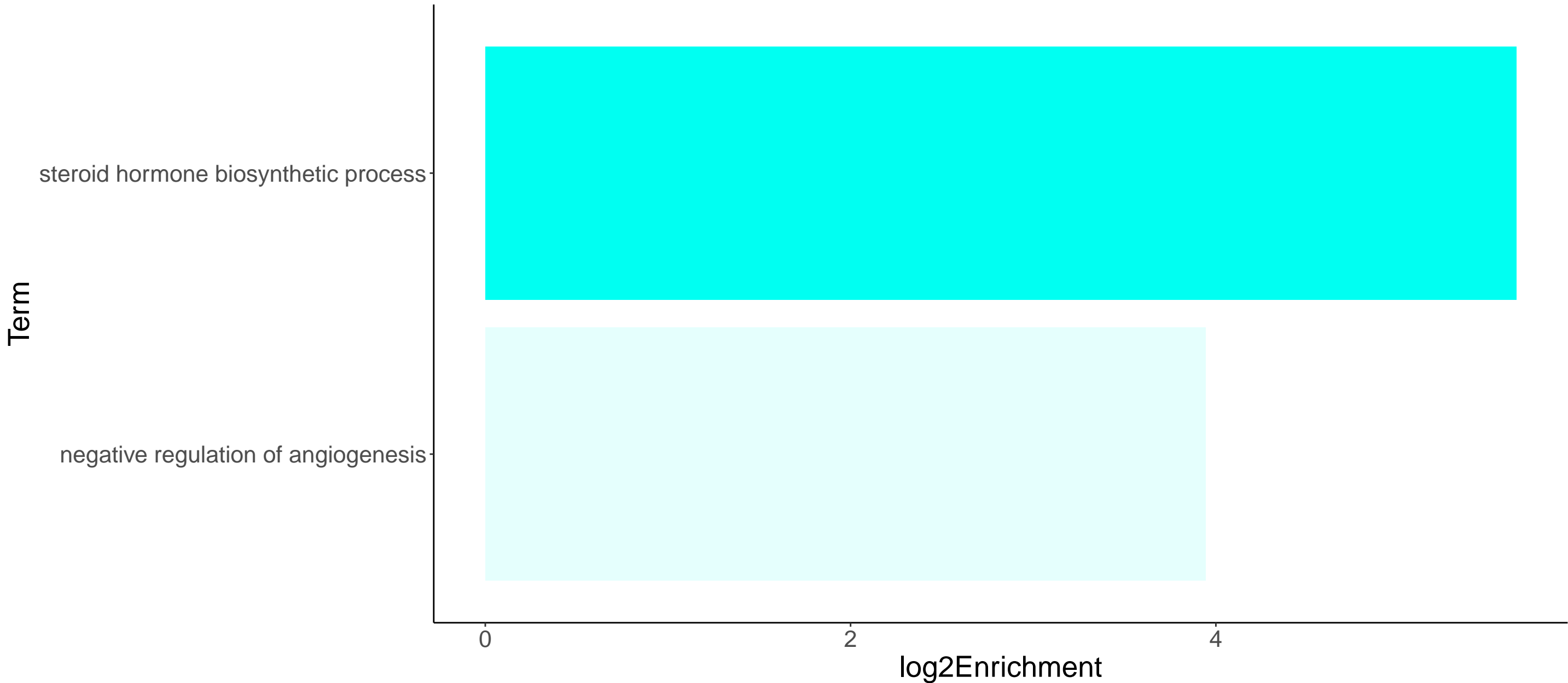
negative regulation of angiogenesis

0

2

4

log2Enrichment



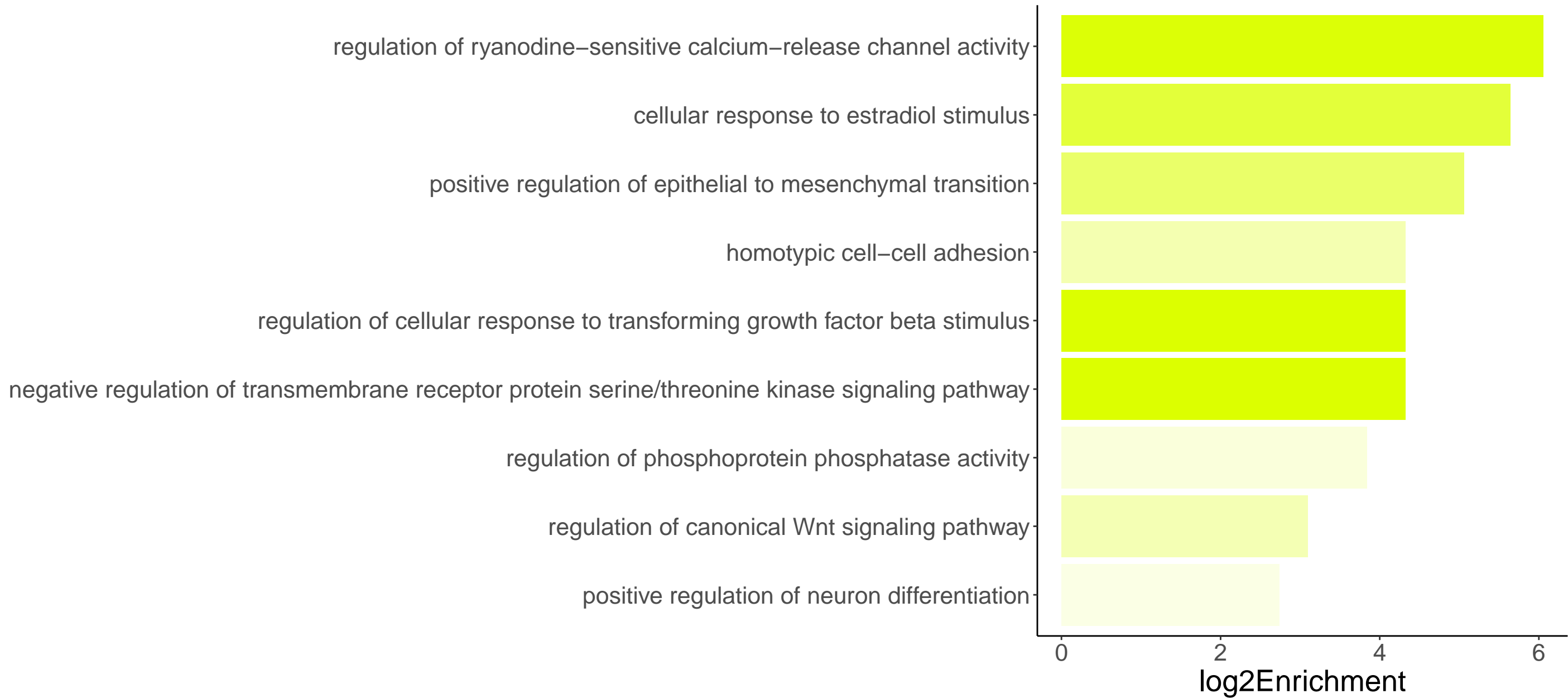
Re-clustered module 9.1.7 MF enrichment

Term

log2Enrichment



Term



Re-clustered module 9.1.8 MF enrichment

Term

signaling receptor complex adaptor activity

0

2

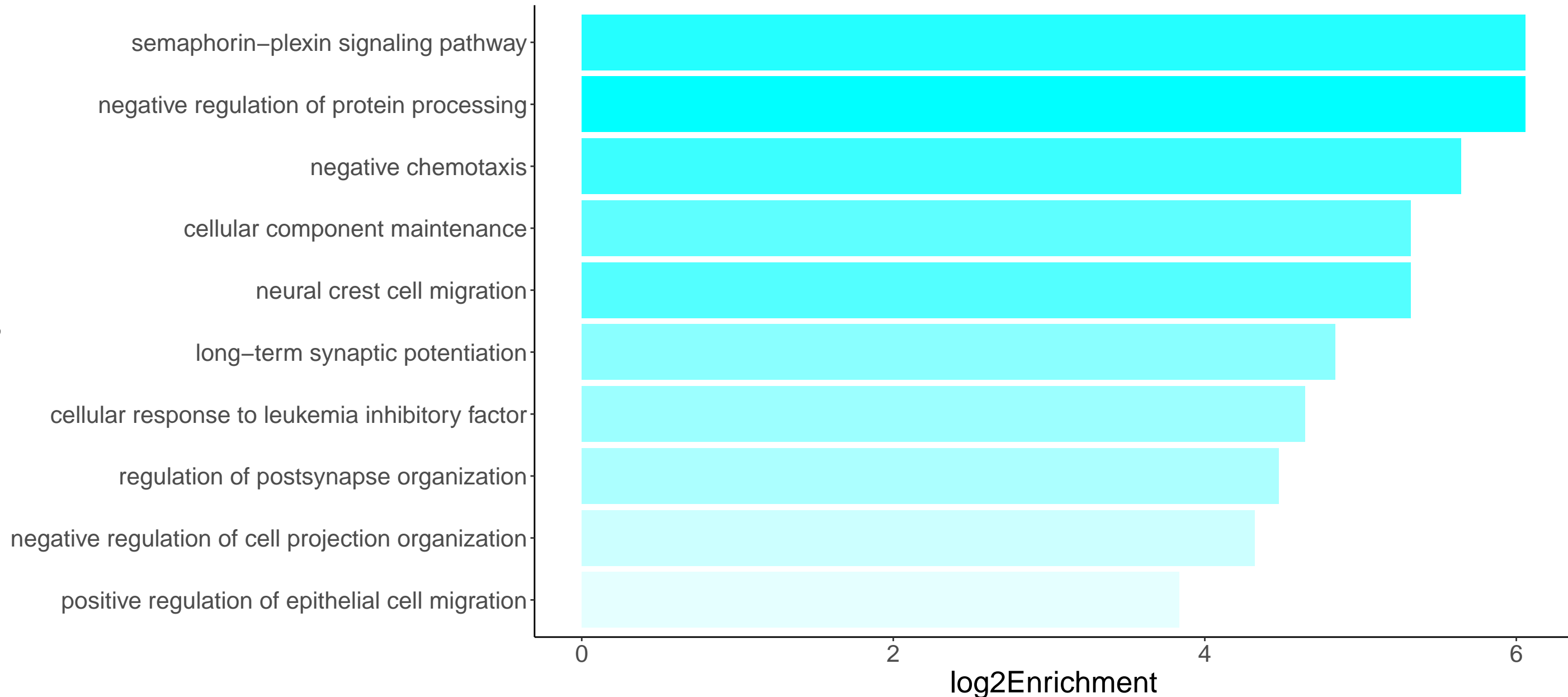
4

log2Enrichment



Re-clustered module 9.1.9 BP enrichment

Term



Re-clustered module 9.1.9 MF enrichment

Term

endopeptidase inhibitor activity

0

1

2

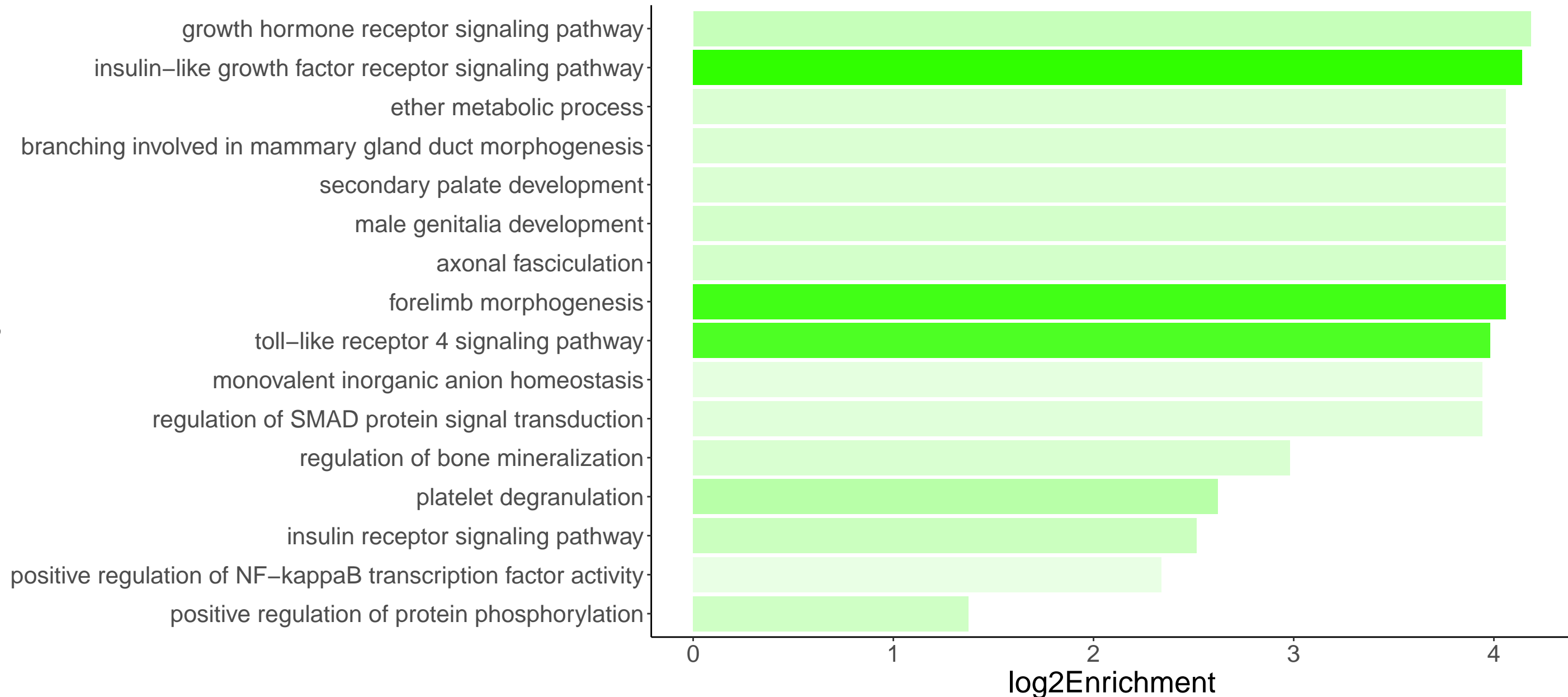
3

log2Enrichment



Re-clustered module 9.10 BP enrichment

Term



Re-clustered module 9.10 MF enrichment

Term

transforming growth factor beta receptor binding

ephrin receptor binding

Wnt-protein binding

cysteine-type endopeptidase inhibitor activity

proton transmembrane transporter activity

active ion transmembrane transporter activity

0

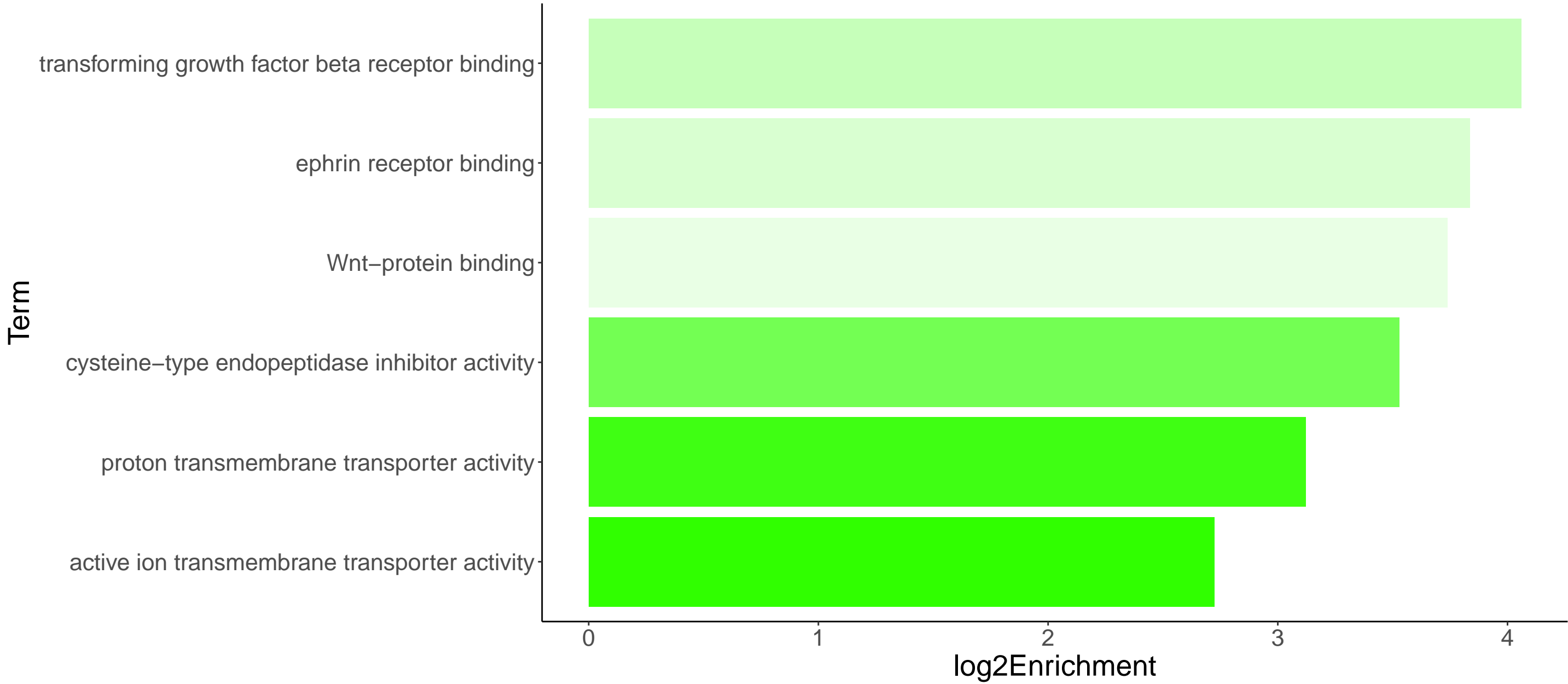
1

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log2Enrichment



Re-clustered module 9.11.1 BP enrichment

Term

heart looping

protein O-linked glycosylation

regulation of calcium-mediated signaling

peptidyl-threonine modification

liver development

0

1

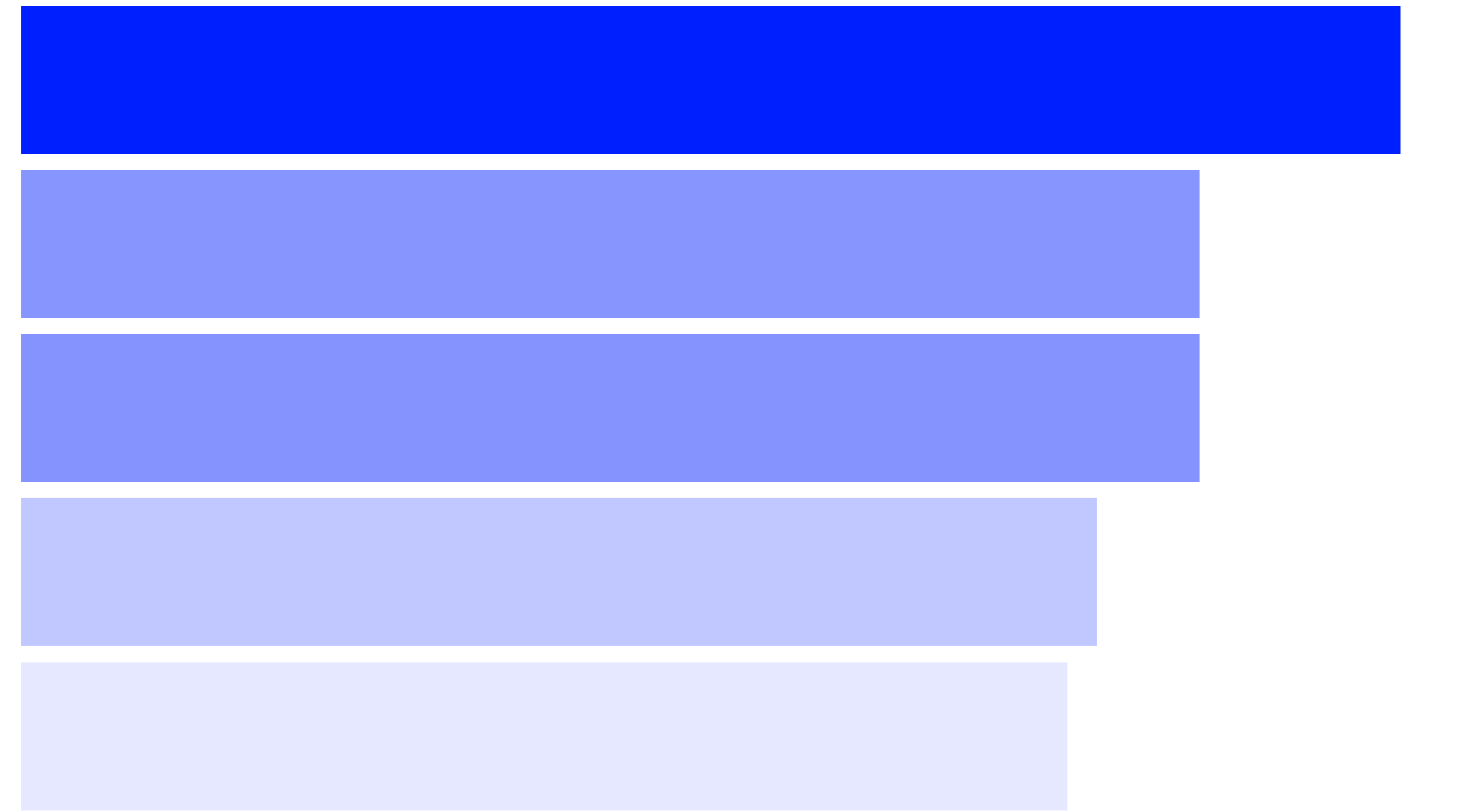
2

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4

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log2Enrichment



Re-clustered module 9.11.1 MF enrichment

Term

ATPase binding

UDP-glycosyltransferase activity

0

1

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log2Enrichment



Re-clustered module 9.11.2 BP enrichment

Term

adult behavior

endocytosis

0

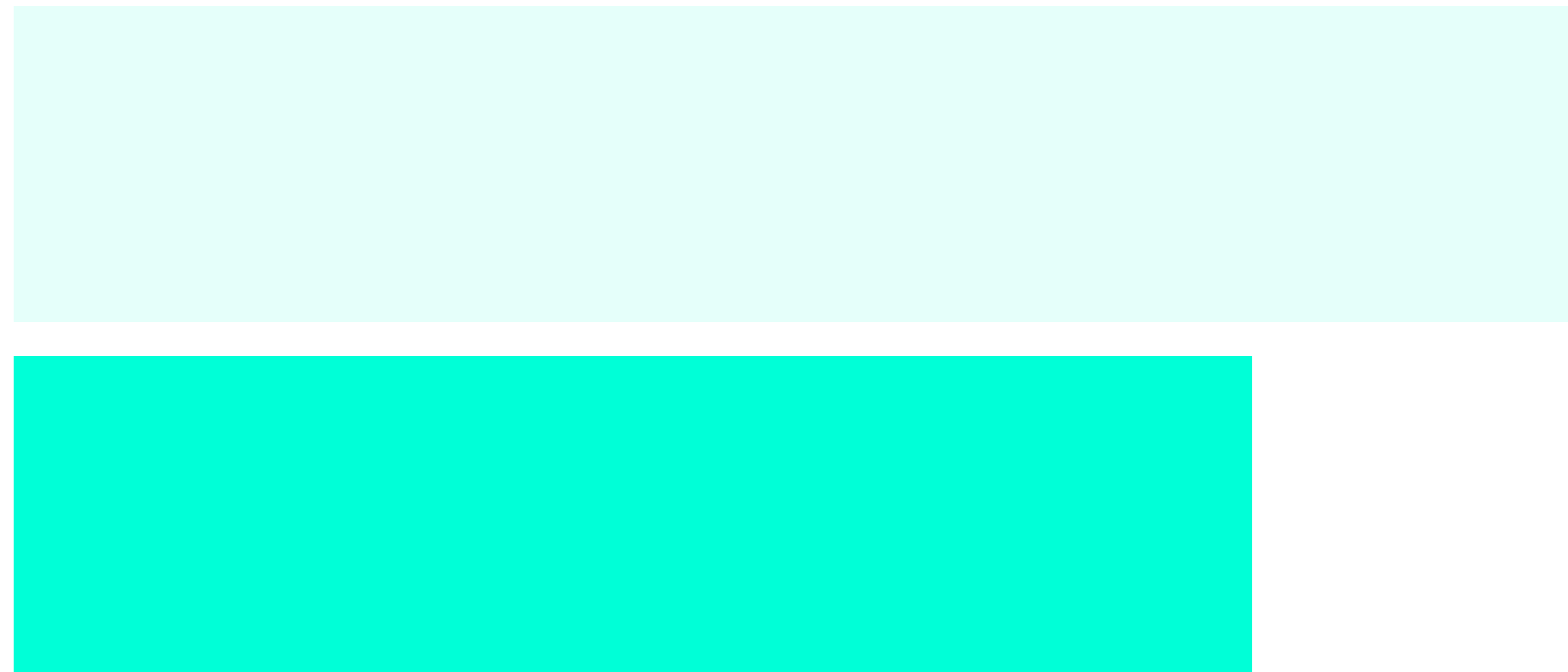
1

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log2Enrichment



Re-clustered module 9.11.2 MF enrichment

Term

cargo receptor activity

drug binding

tetrapyrrole binding

0

1

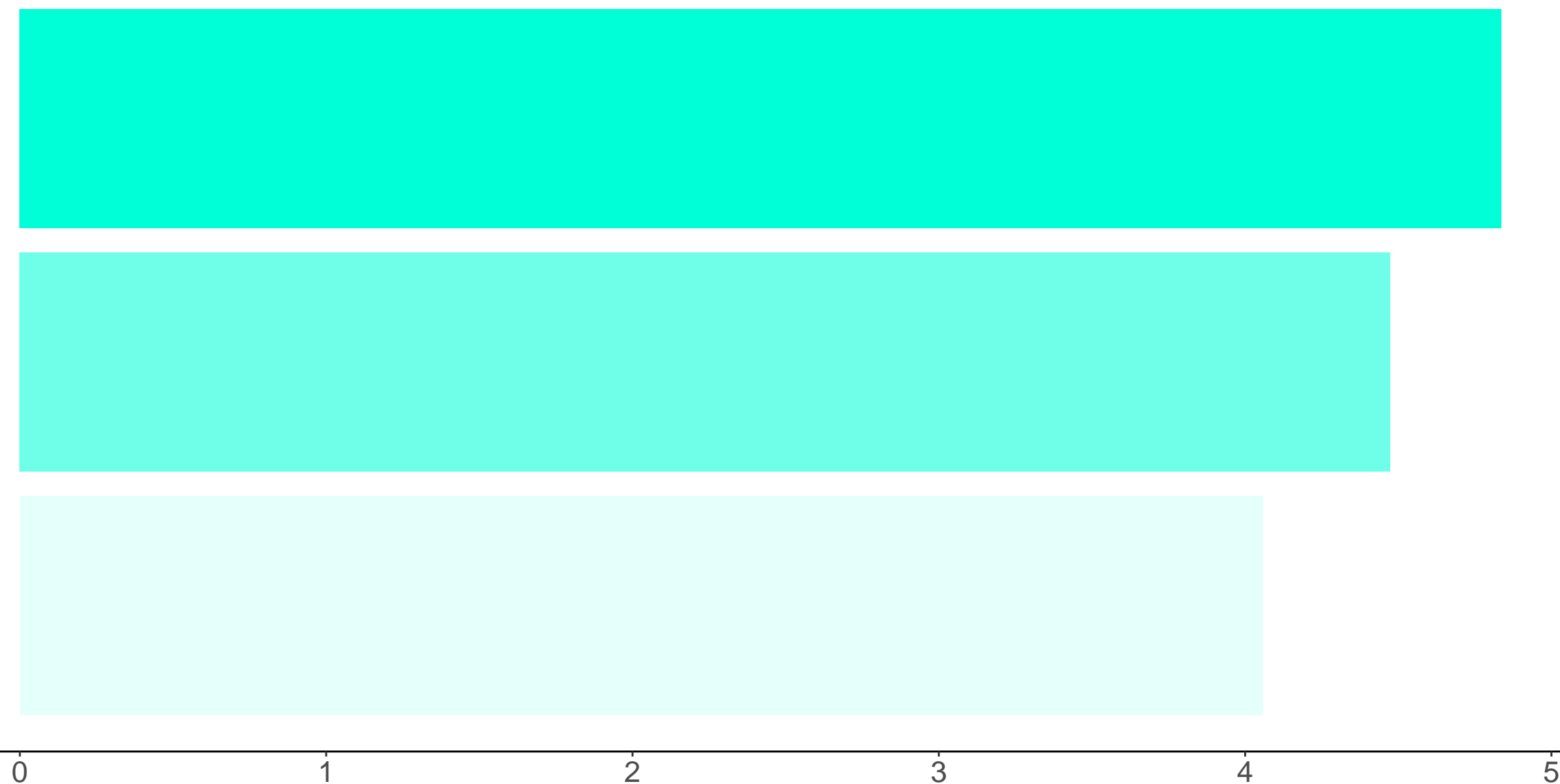
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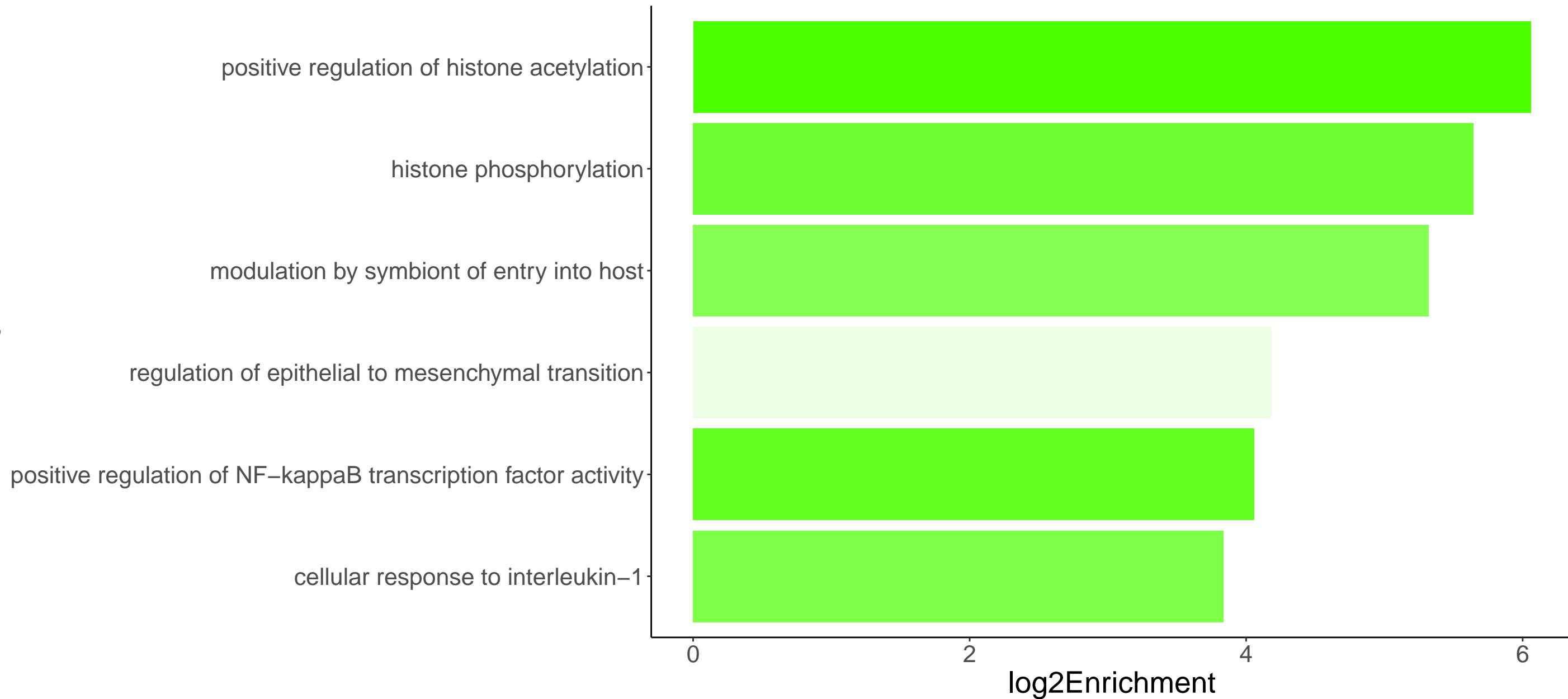
5

log2Enrichment



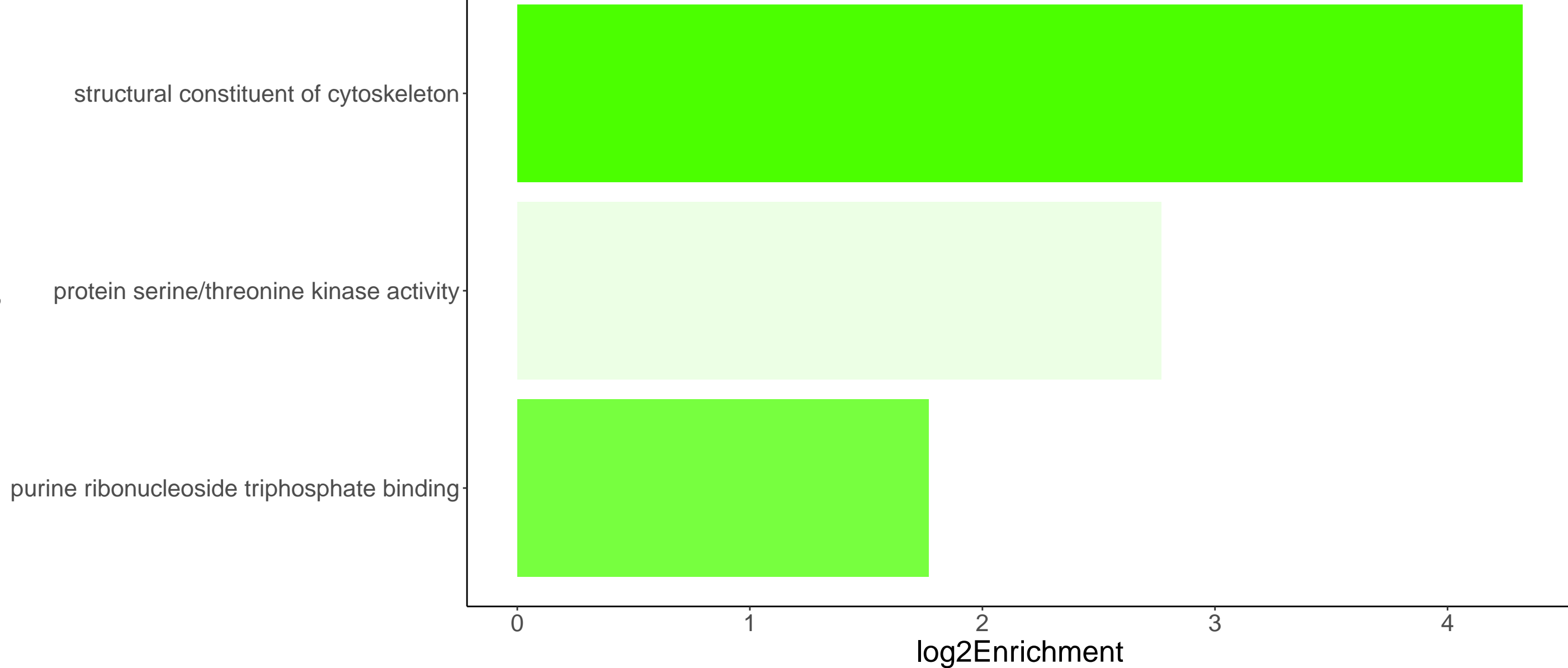
Re-clustered module 9.11.3 BP enrichment

Term



Re-clustered module 9.11.3 MF enrichment

Term



Re-clustered module 9.11.4 BP enrichment

Term

vascular process in circulatory system

positive regulation of apoptotic signaling pathway

0

1

2

3

4

log2Enrichment



Re-clustered module 9.11.4 MF enrichment

Term

protease binding

0

1

2

3

4

log2Enrichment



Re-clustered module 9.11.5 BP enrichment

Term

log2Enrichment



Re-clustered module 9.11.5 MF enrichment

Term

log2Enrichment



Re-clustered module 9.11.6 BP enrichment

Term

protein destabilization

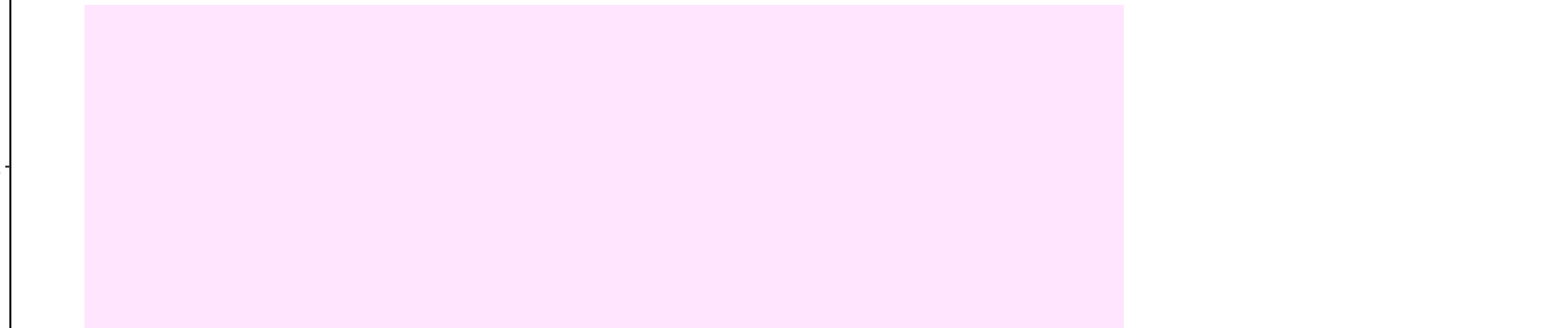
sprouting angiogenesis

0

2

4

log2Enrichment



Re-clustered module 9.11.6 MF enrichment

Term

metalloendopeptidase activity

ubiquitin protein ligase activity

0

1

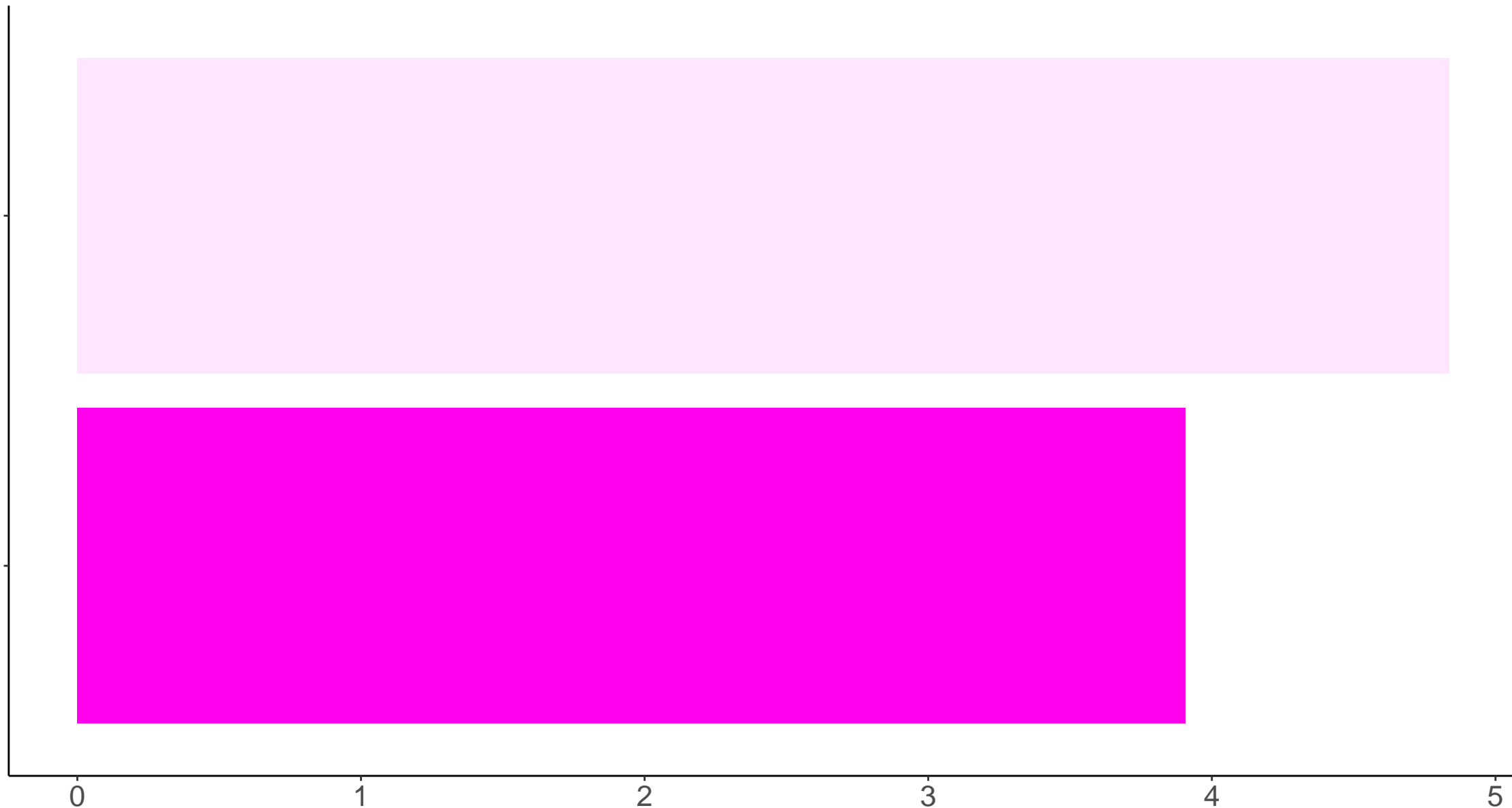
2

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log2Enrichment



Re-clustered module 9.11.8 BP enrichment

Term

cellular response to chemokine

0

1

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4

log2Enrichment



Re-clustered module 9.11.8 MF enrichment

Term

receptor tyrosine kinase binding

calcium-dependent protein binding

Ras guanyl-nucleotide exchange factor activity

0

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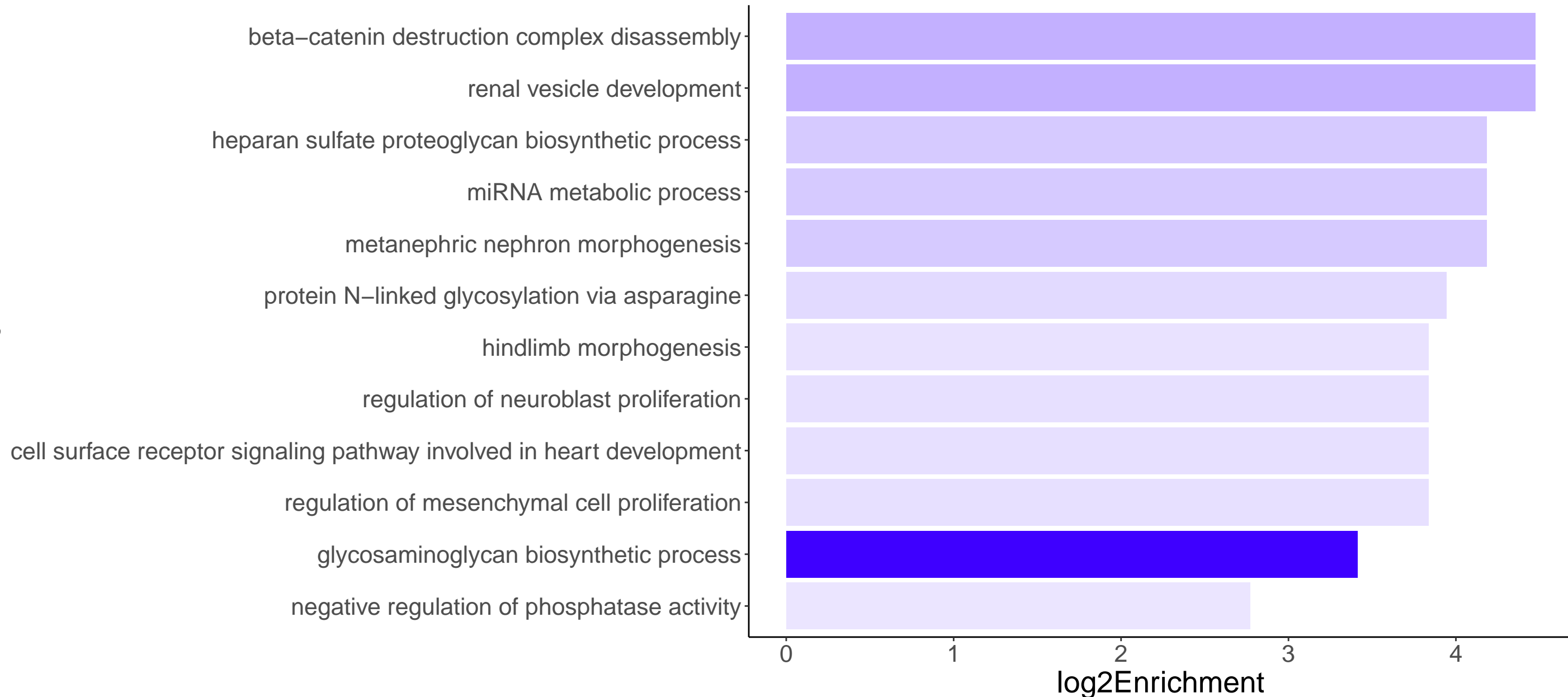
4

log2Enrichment



Re-clustered module 9.12 BP enrichment

Term



Re-clustered module 9.12 MF enrichment

Term

vitamin transmembrane transporter activity

acetylgalactosaminyltransferase activity

carbohydrate binding

GTPase regulator activity

cell adhesion molecule binding

0

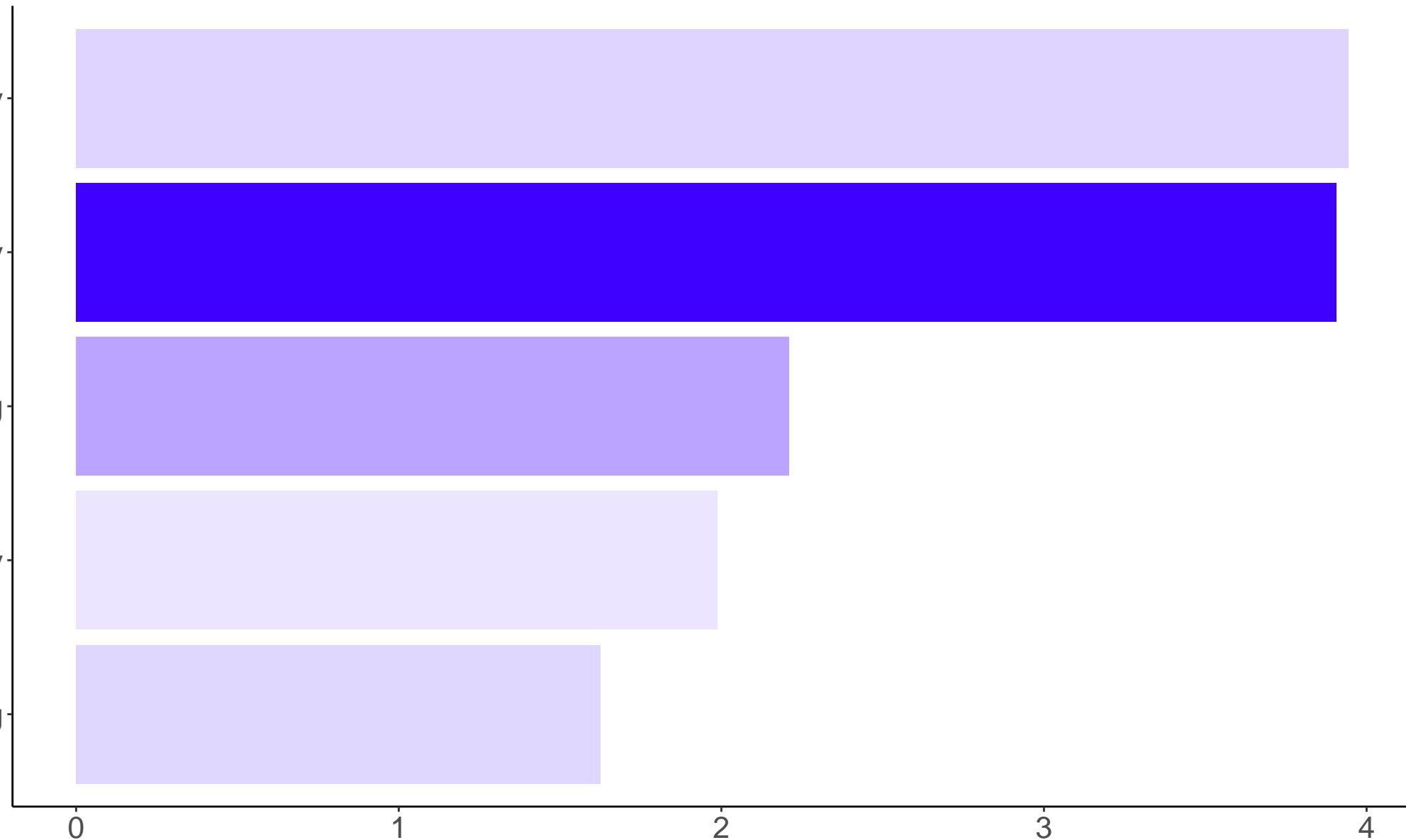
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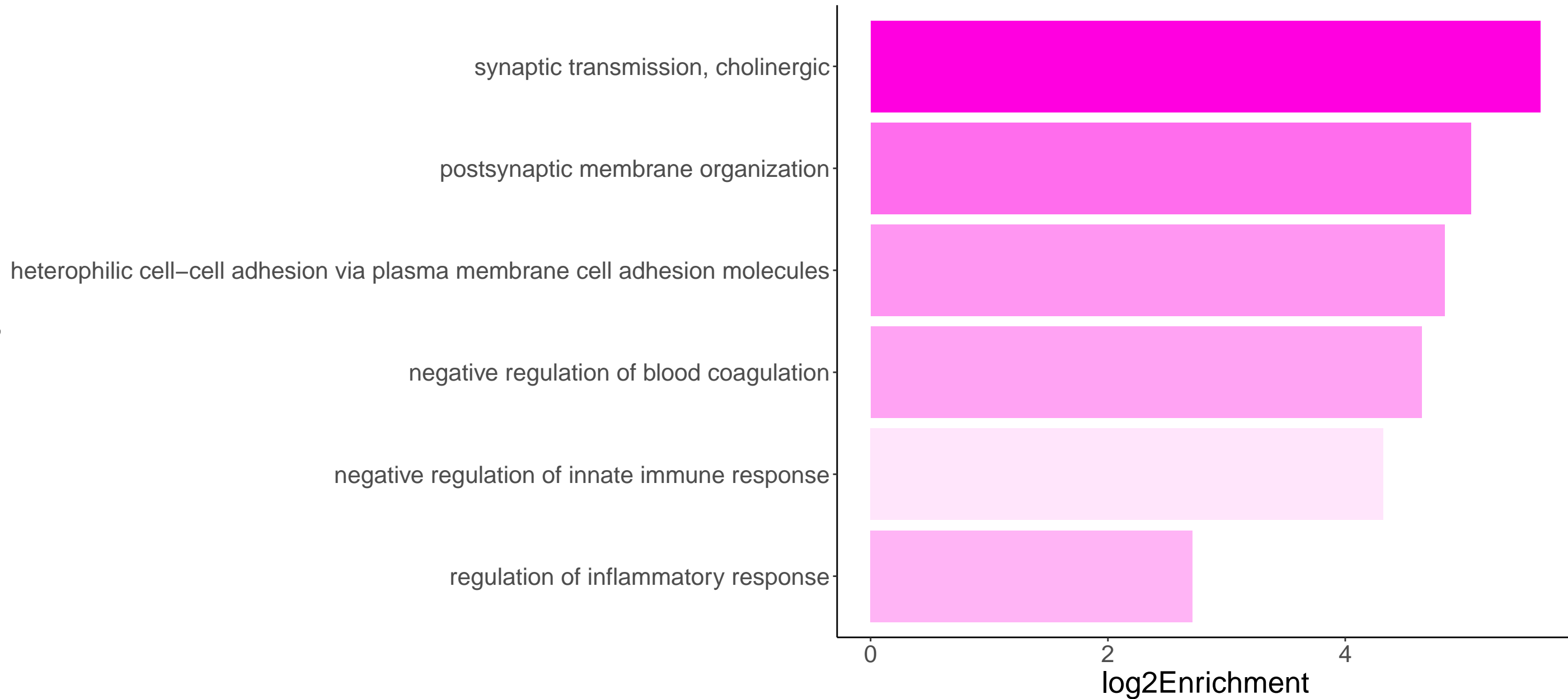
4

log2Enrichment



Re-clustered module 9.13 BP enrichment

Term



Re-clustered module 9.13 MF enrichment

Term

heparin binding

0

1

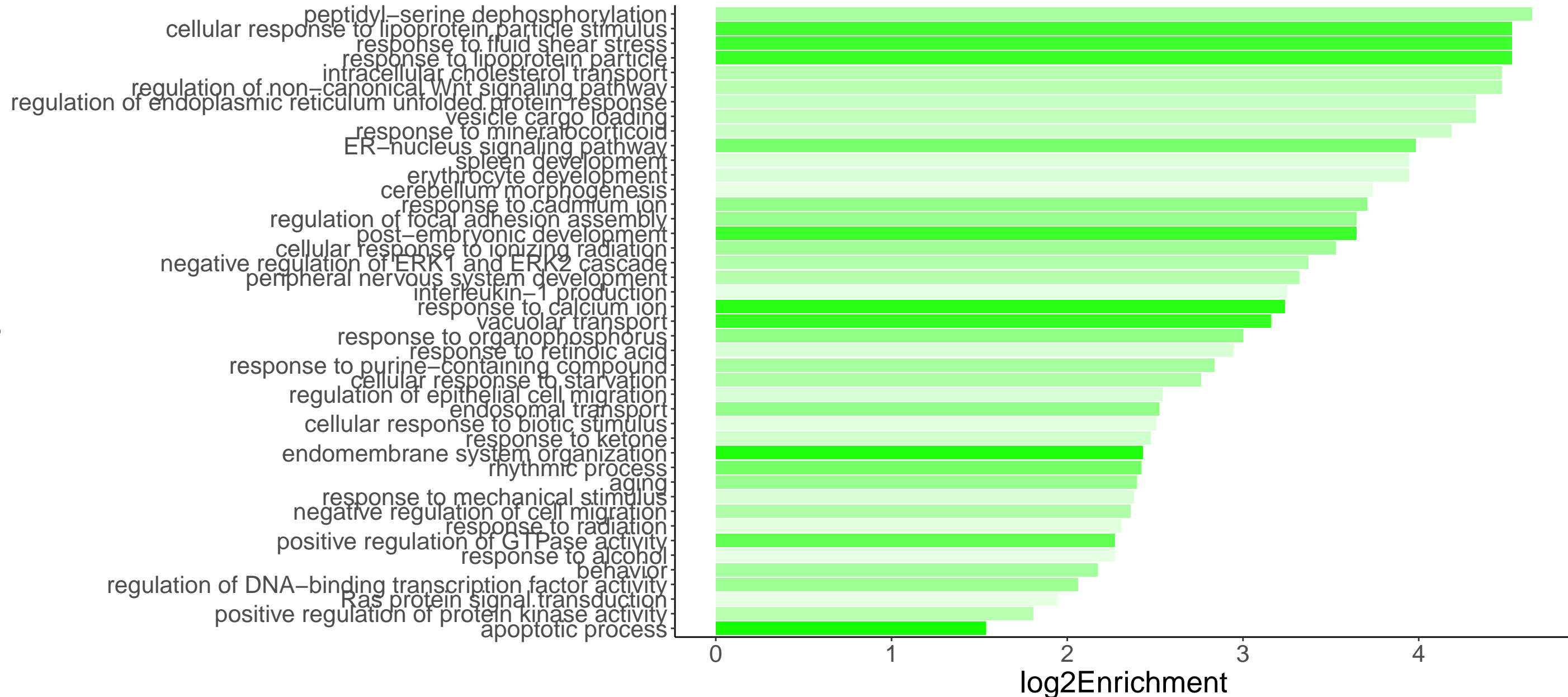
2

3

log2Enrichment

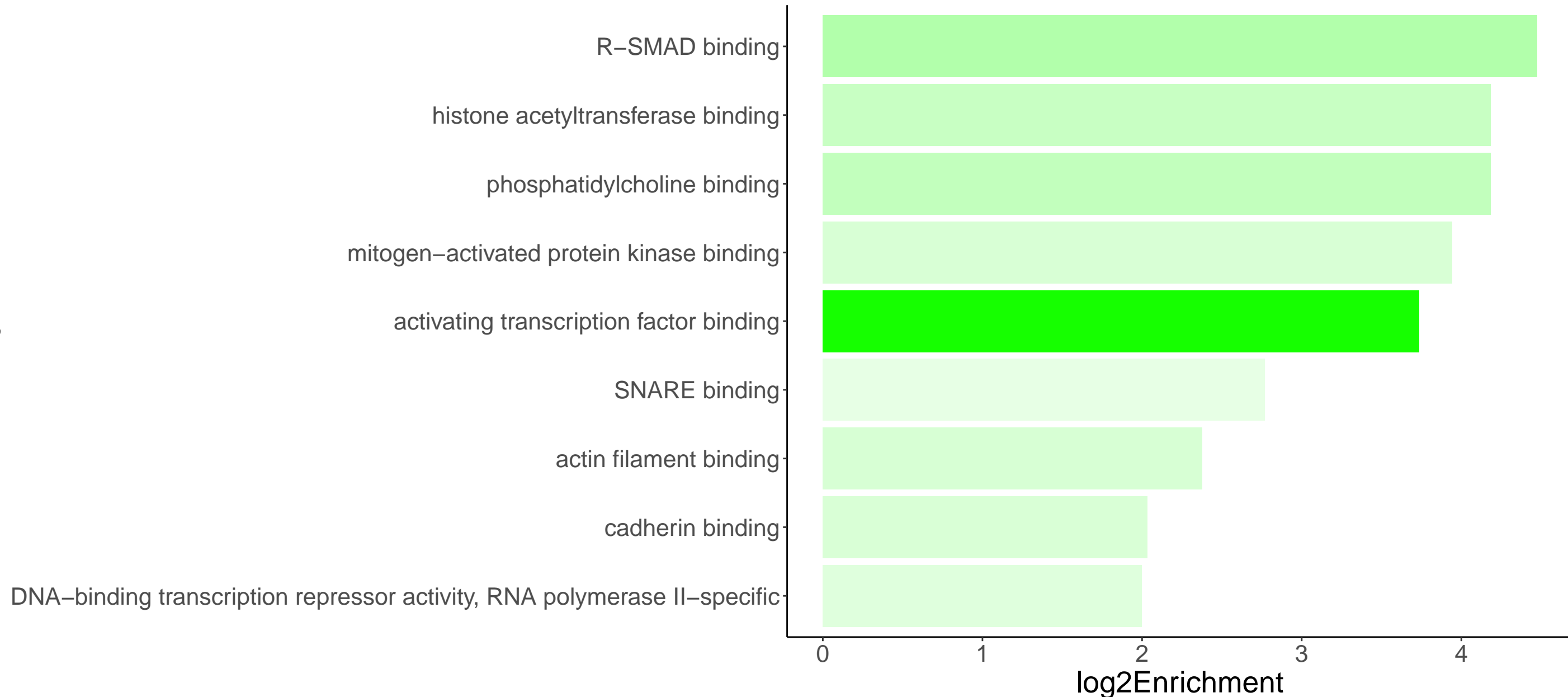


Re-clustered module 9.15 BP enrichment



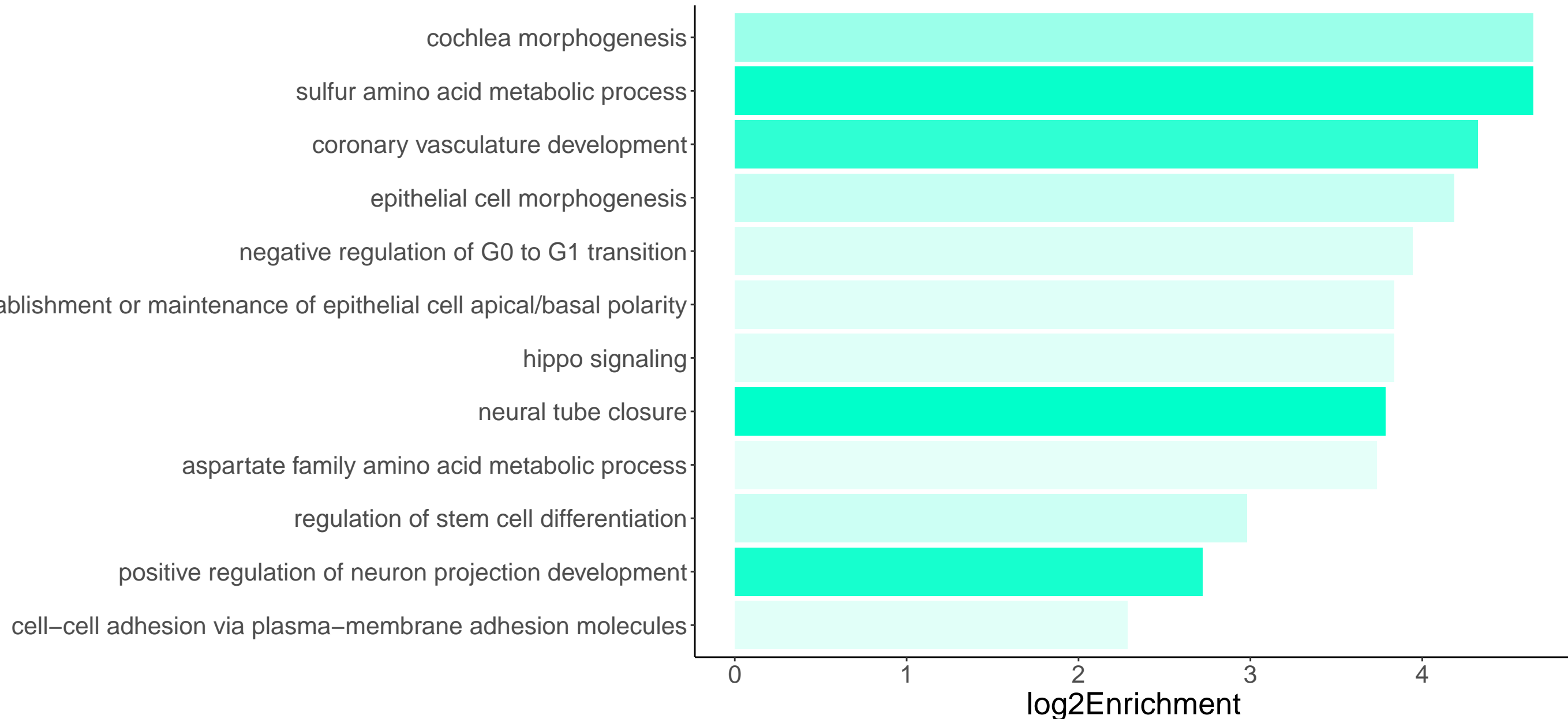
Re-clustered module 9.15 MF enrichment

Term



Re-clustered module 9.16 BP enrichment

Term



Re-clustered module 9.16 MF enrichment

Term

O-acyltransferase activity

protein domain specific binding

0

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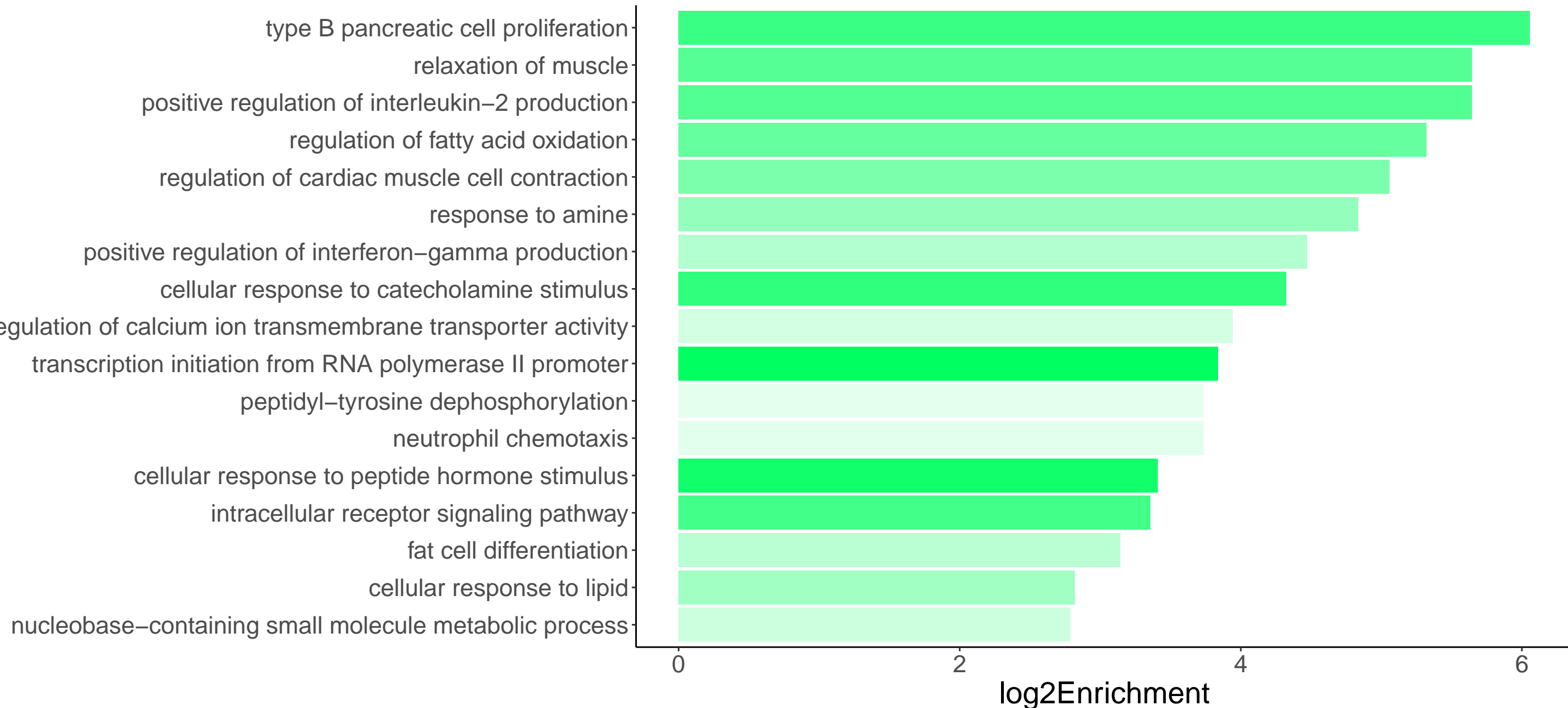
4

log2Enrichment



Re-clustered module 9.17 BP enrichment

Term



Re-clustered module 9.17 MF enrichment

Term

cAMP binding

steroid hormone receptor activity

protein tyrosine/serine/threonine phosphatase activity

steroid hormone receptor binding

nuclear receptor binding

protein tyrosine phosphatase activity

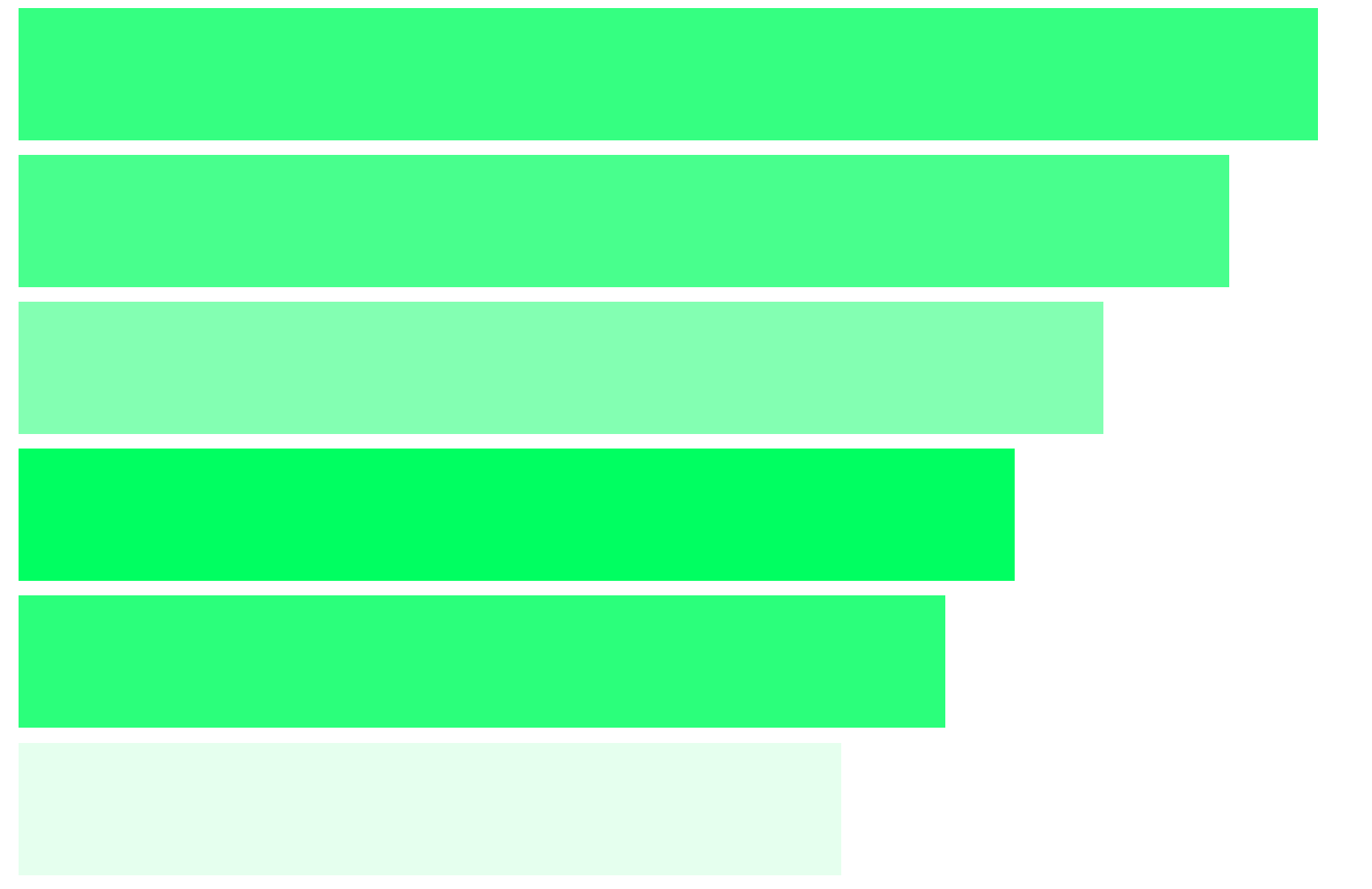
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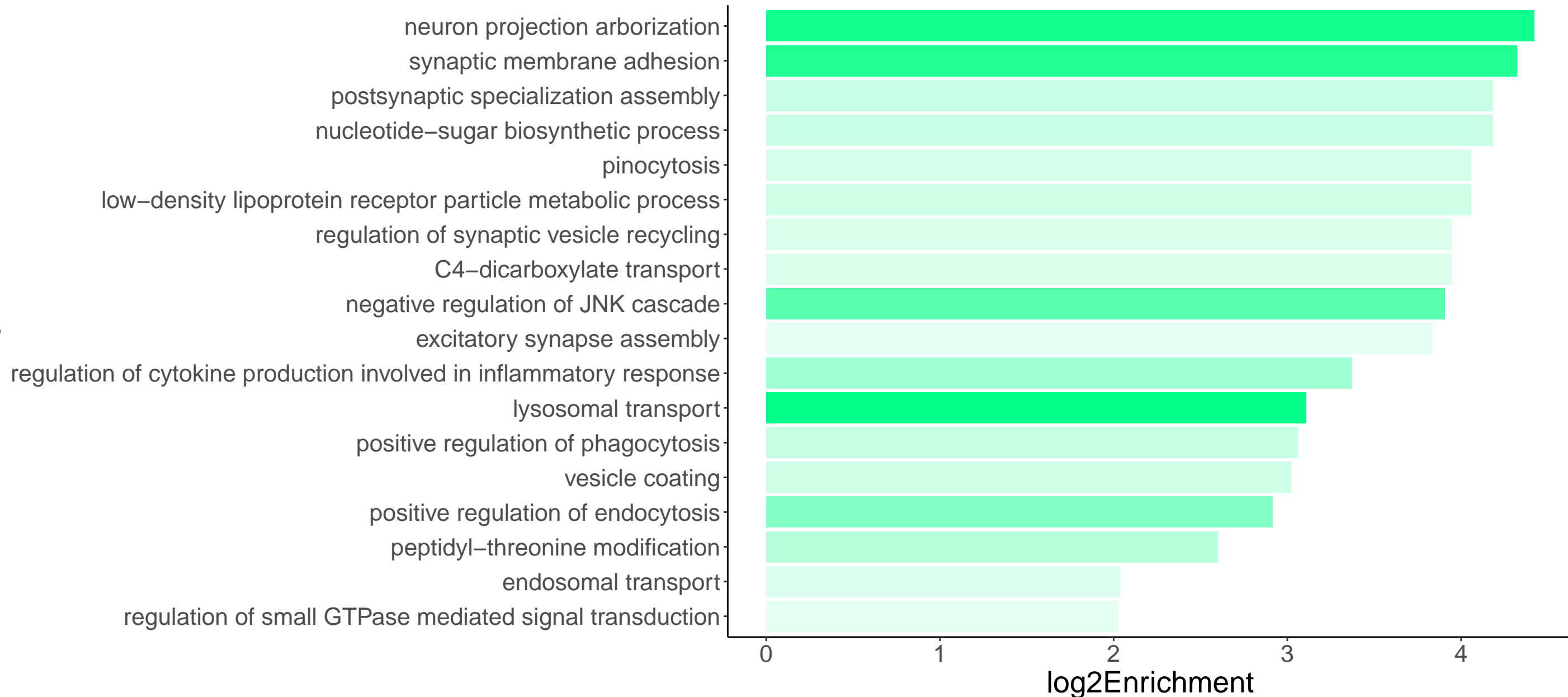
6

log2Enrichment



Re-clustered module 9.18 BP enrichment

Term



Re-clustered module 9.18 MF enrichment

Term

dicarboxylic acid transmembrane transporter activity

growth factor binding

integrin binding

phosphatidylinositol binding

protein kinase binding

0

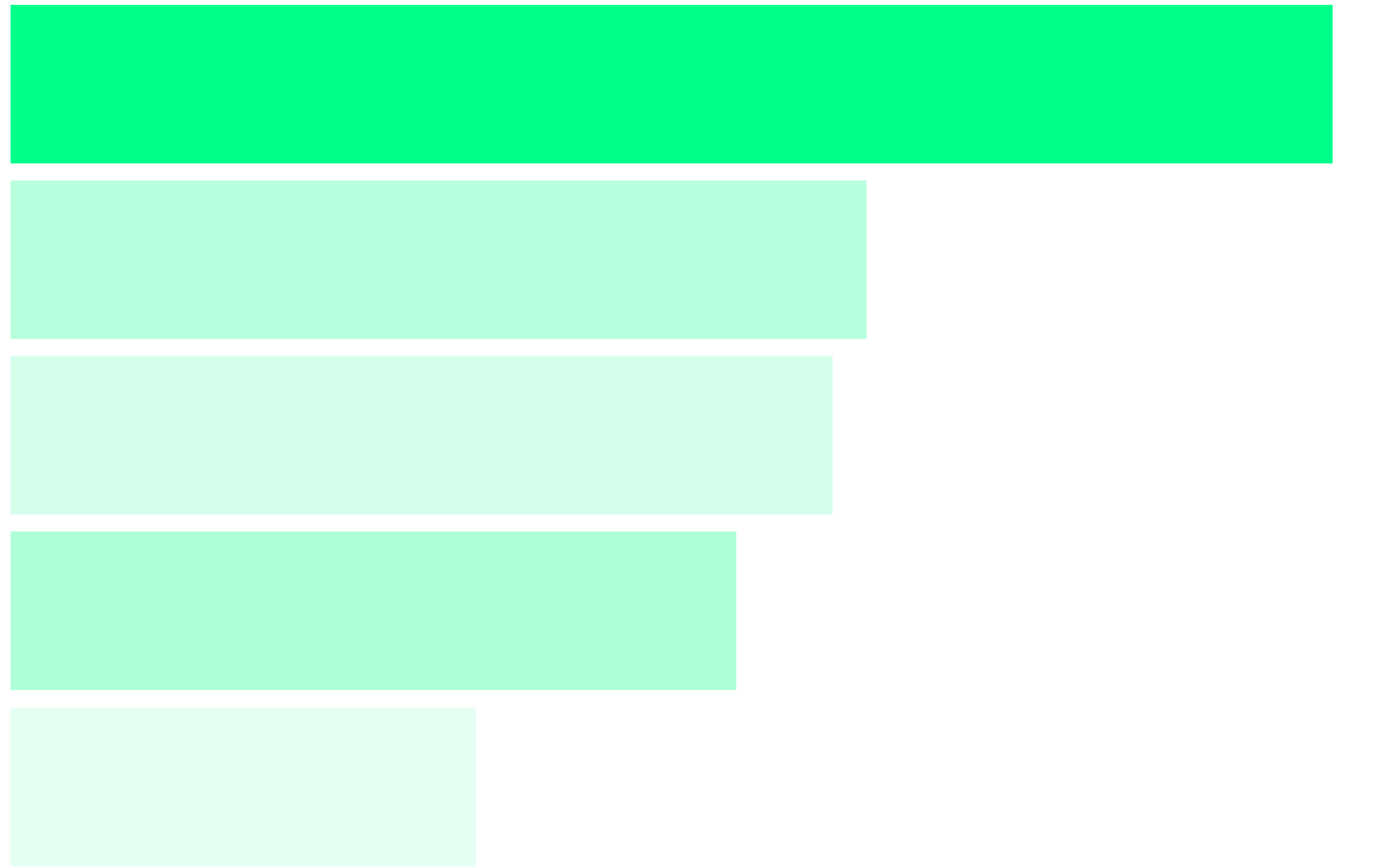
1

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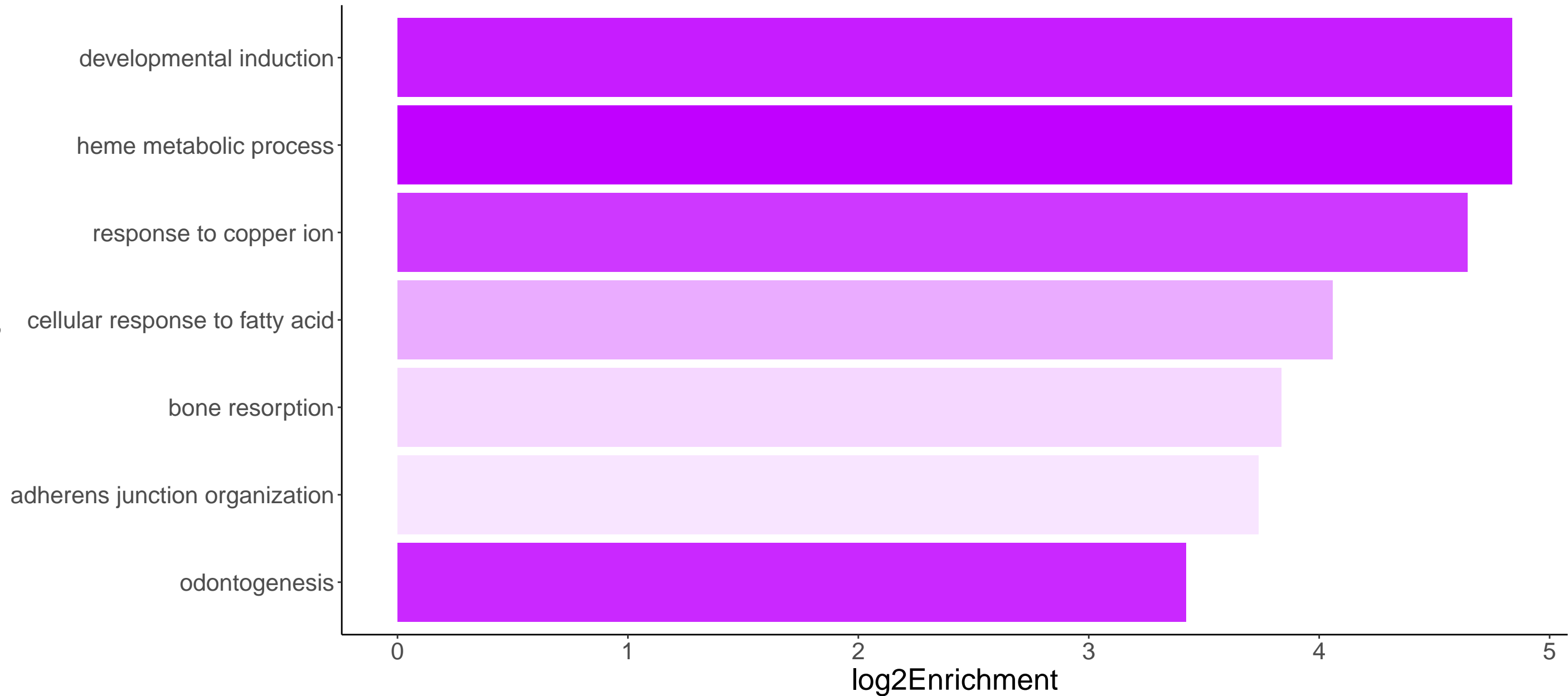
4

log2Enrichment



Re-clustered module 9.19 BP enrichment

Term



Re-clustered module 9.19 MF enrichment

Term

oxidoreductase activity, acting on the CH-CH group of donors, NAD or NADP as acceptor

RNA polymerase II activating transcription factor binding

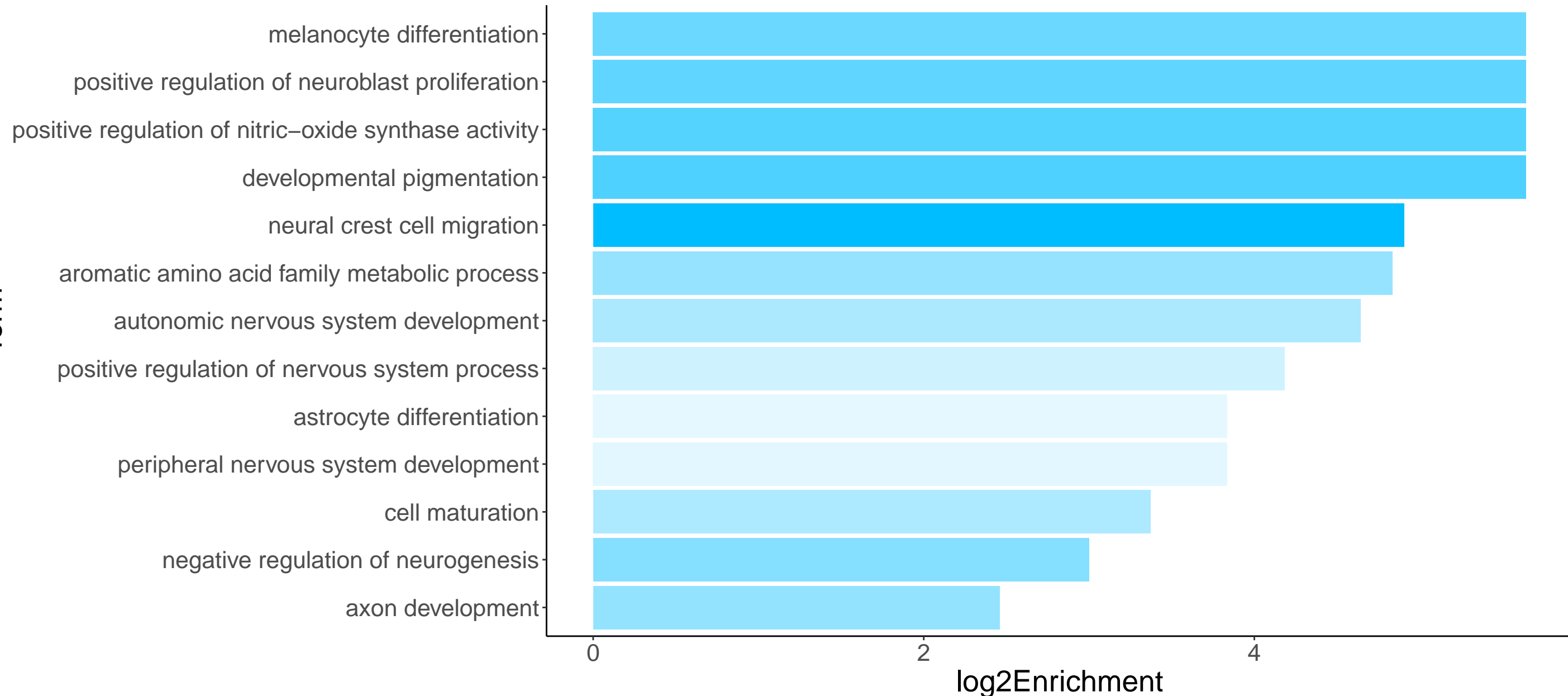
0 1 2 3 4 5

log2Enrichment



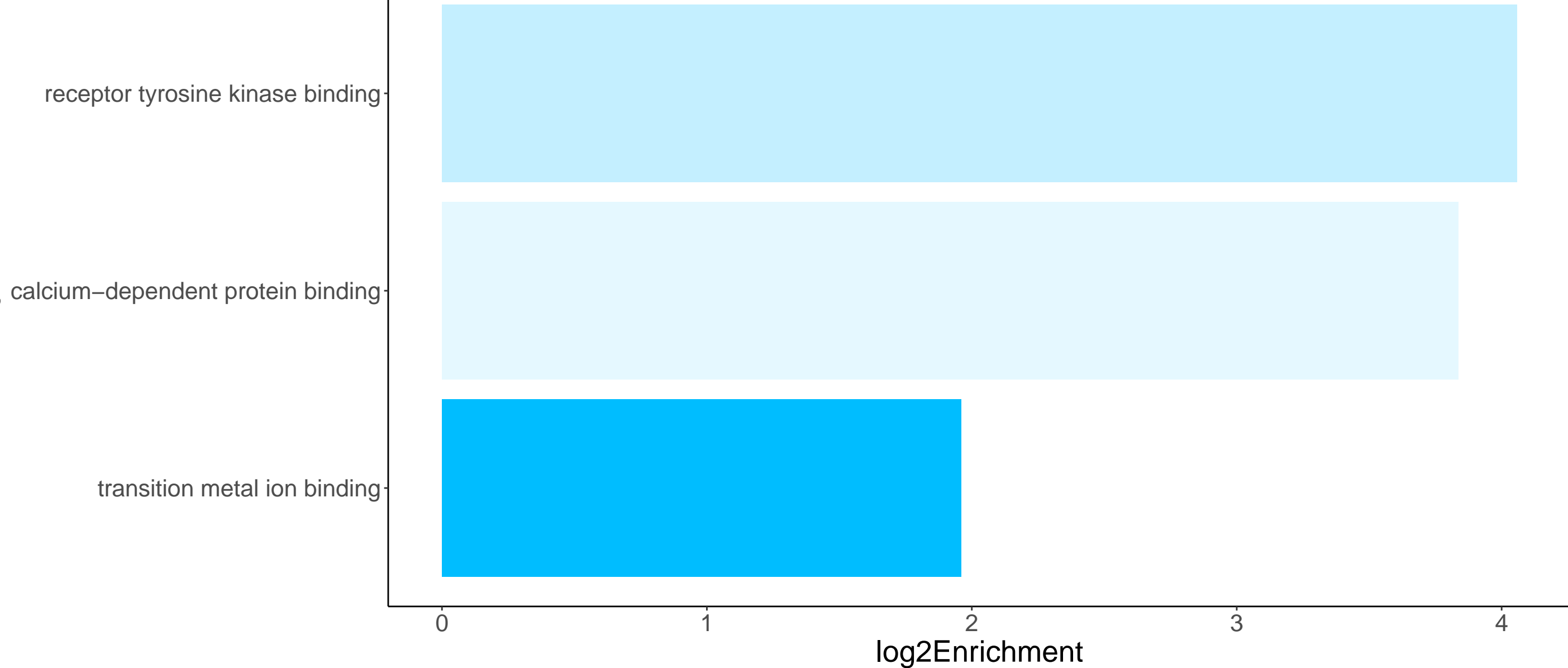
Re-clustered module 9.2.1 BP enrichment

Term



Re-clustered module 9.2.1 MF enrichment

Term



Re-clustered module 9.2.10 BP enrichment

Term

transition metal ion transport

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log2Enrichment



Re-clustered module 9.2.10 MF enrichment

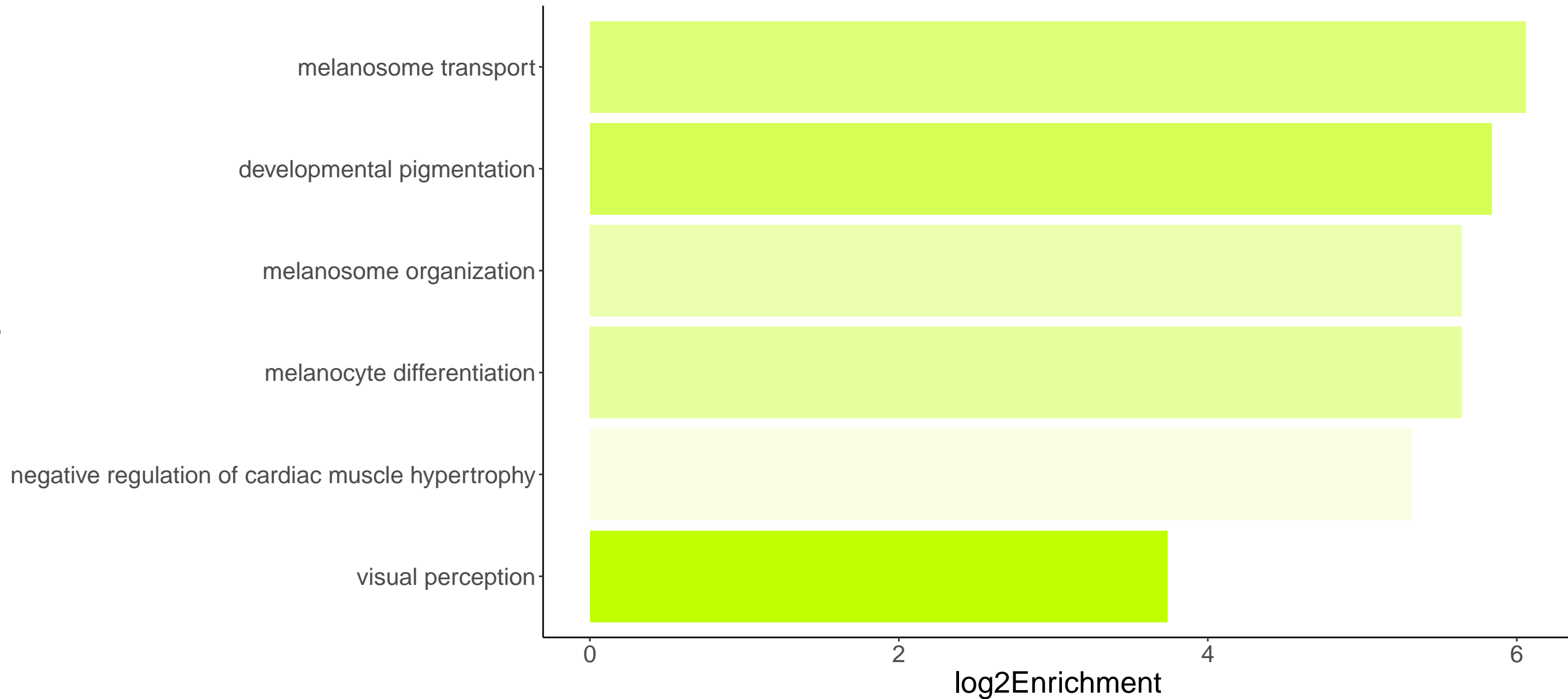
Term

log2Enrichment



Re-clustered module 9.2.2 BP enrichment

Term



Re-clustered module 9.2.2 MF enrichment

Term

log2Enrichment



Re-clustered module 9.2.3 BP enrichment

Term

adenylate cyclase-activating G protein-coupled receptor signaling pathway

0

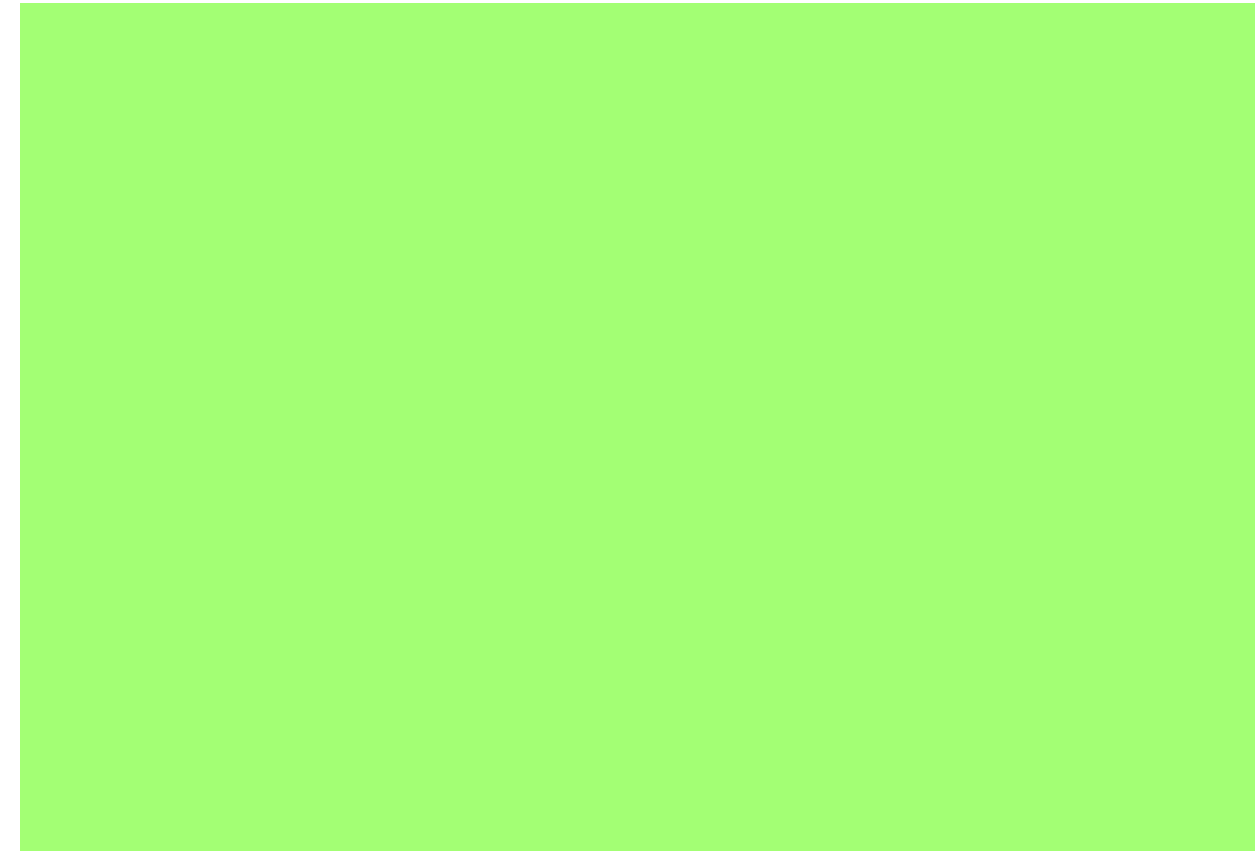
1

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log2Enrichment



Re-clustered module 9.2.3 MF enrichment

Term

log2Enrichment



Re-clustered module 9.2.4 BP enrichment

Term

killing of cells of other organism

antimicrobial humoral response

0

1

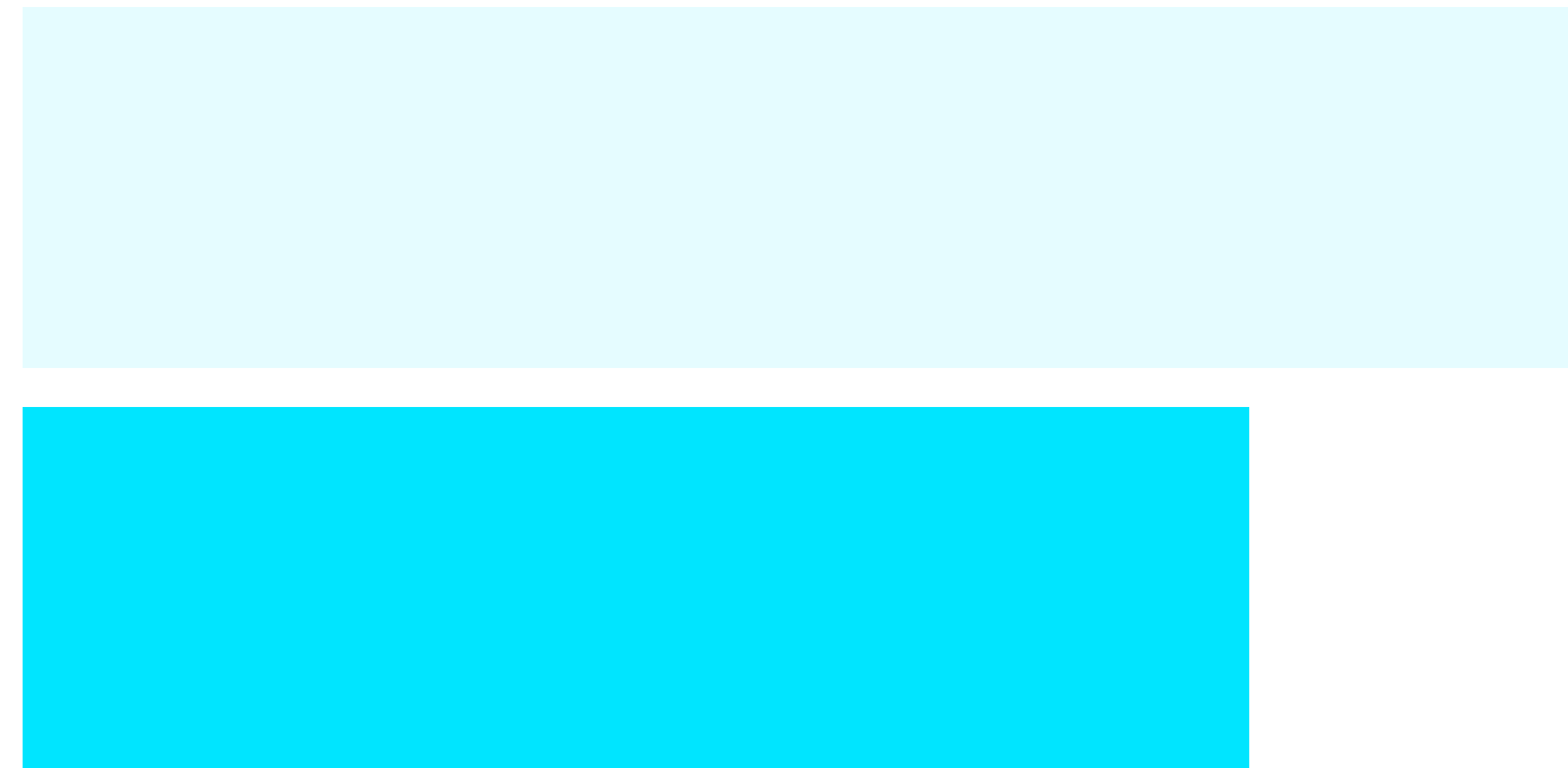
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log2Enrichment



Re-clustered module 9.2.4 MF enrichment

Term

sodium ion transmembrane transporter activity

0

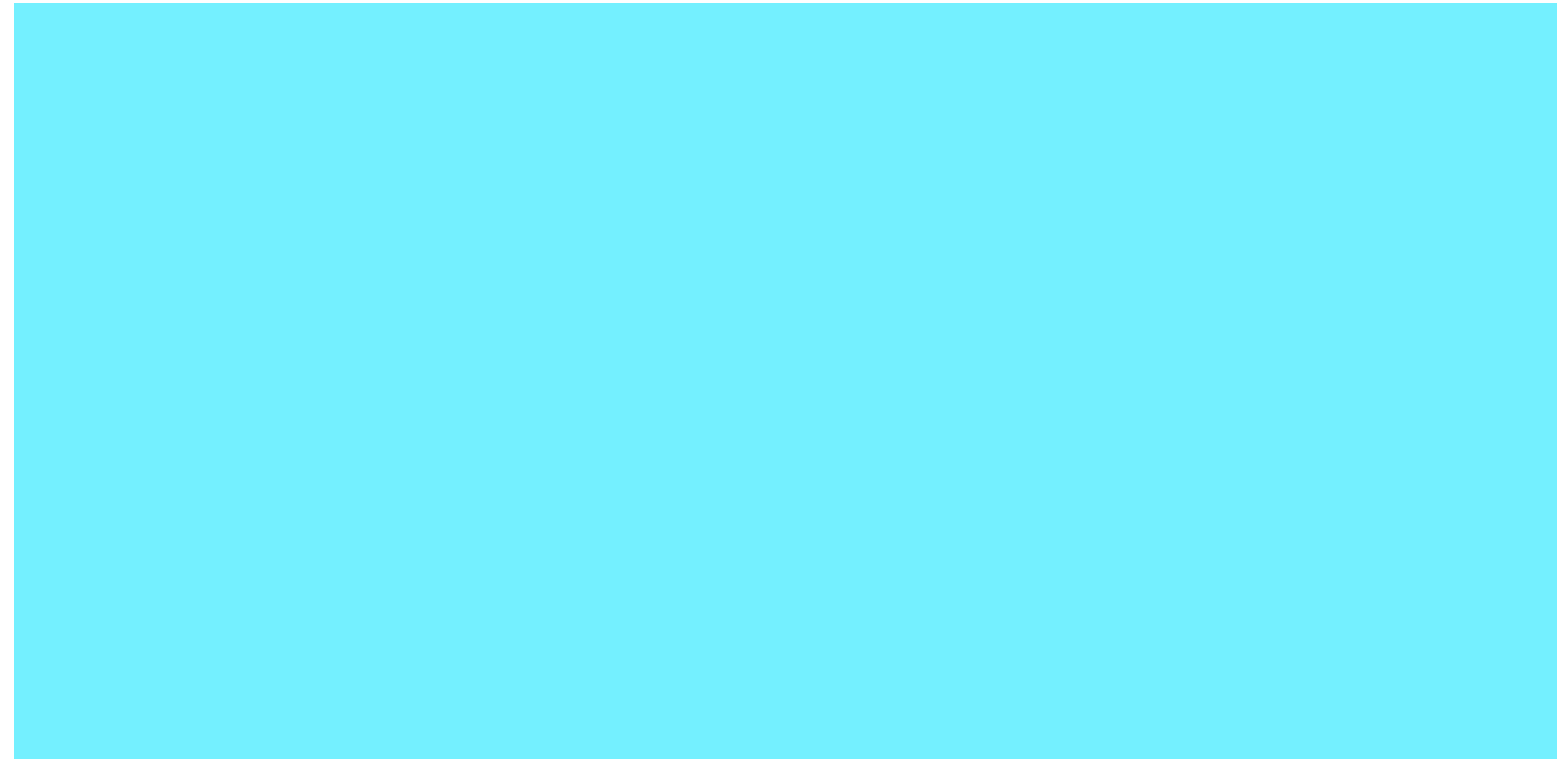
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log2Enrichment



Re-clustered module 9.2.5 BP enrichment

Term

semaphorin-plexin signaling pathway

regulation of axonogenesis

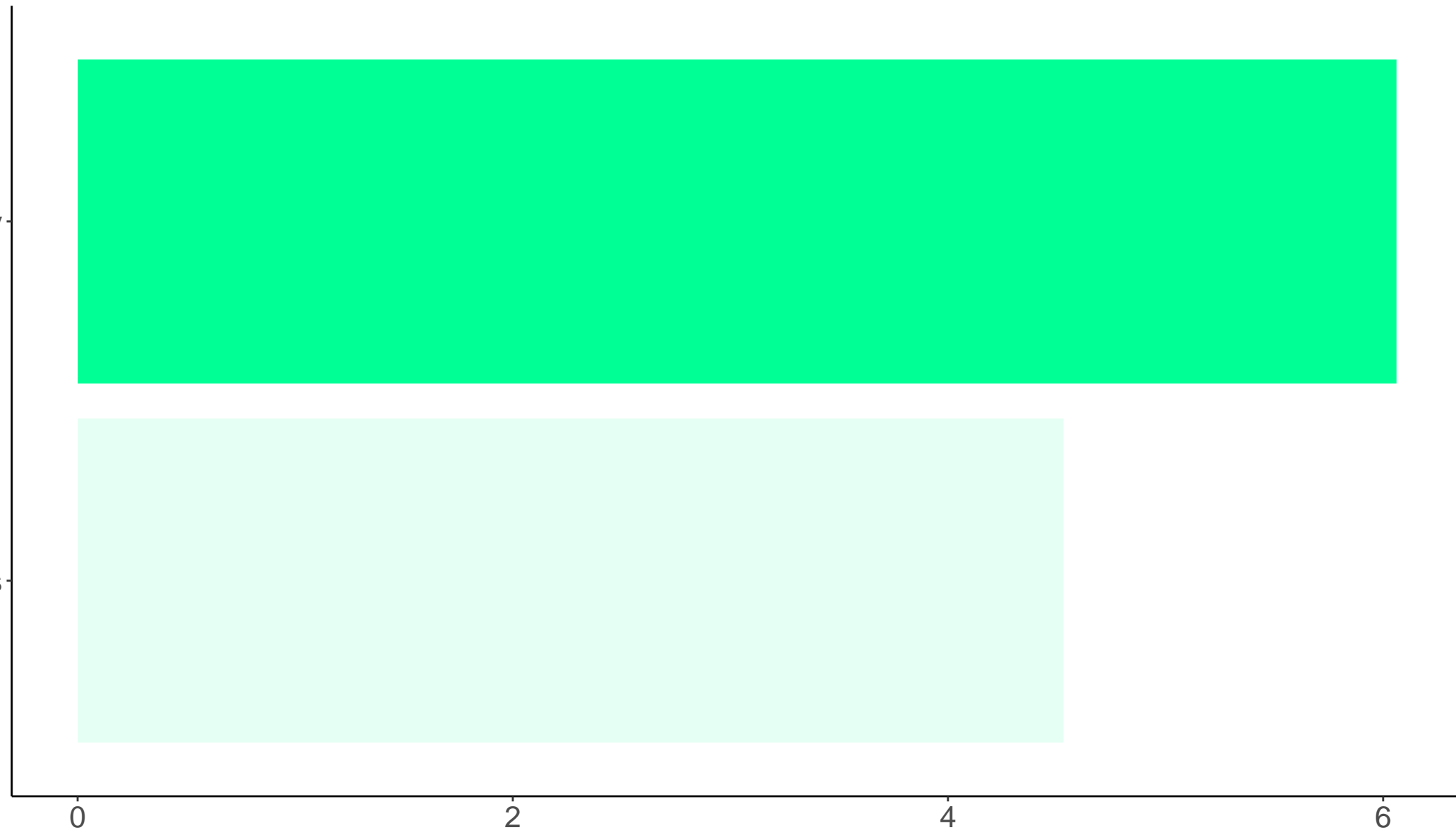
0

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log2Enrichment



Re-clustered module 9.2.5 MF enrichment

Term

log2Enrichment



Re-clustered module 9.2.6 BP enrichment

Term

arginine metabolic process

aging

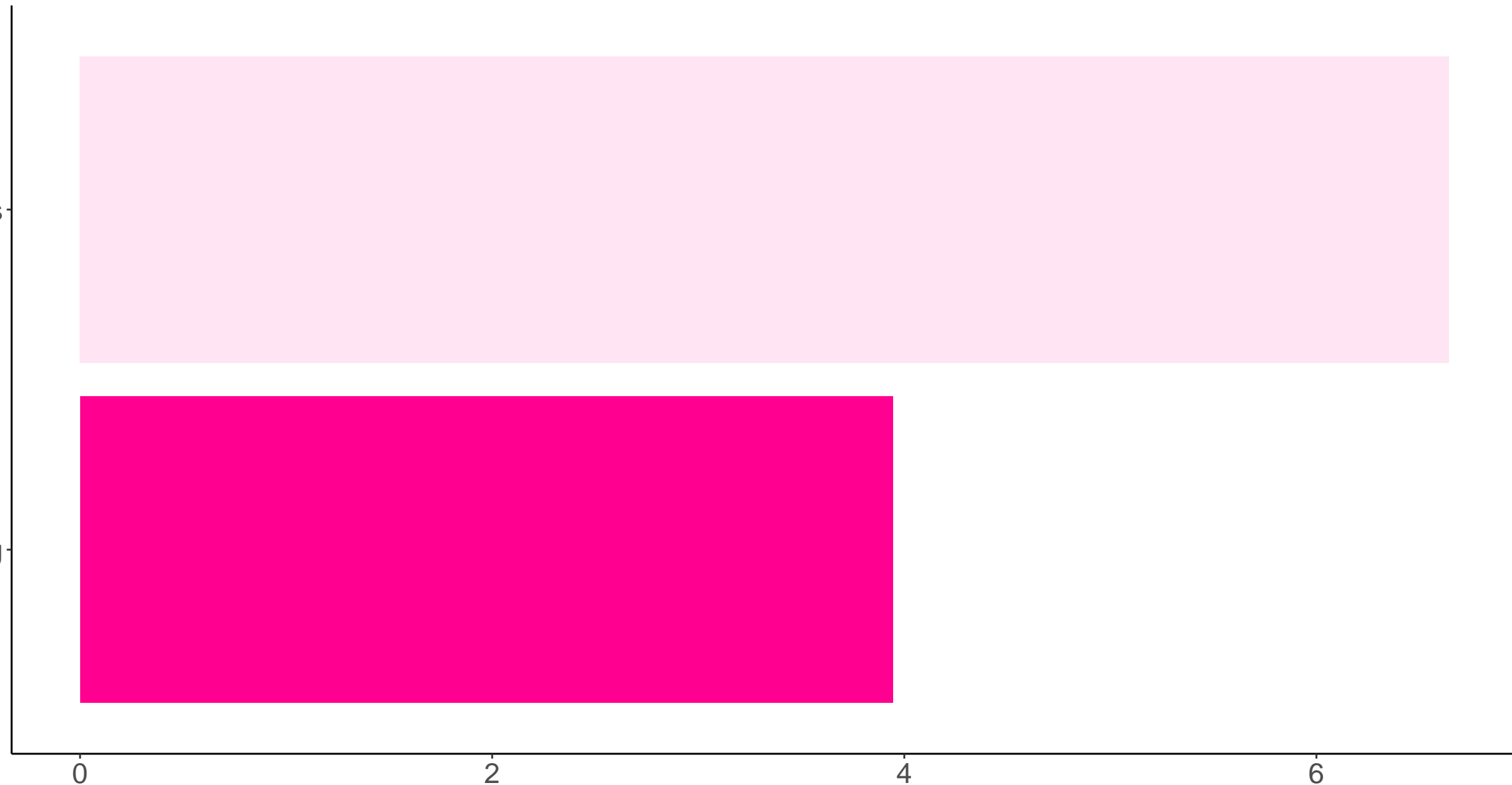
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log2Enrichment



Re-clustered module 9.2.6 MF enrichment

Term

cytoskeletal anchor activity

0

2

4

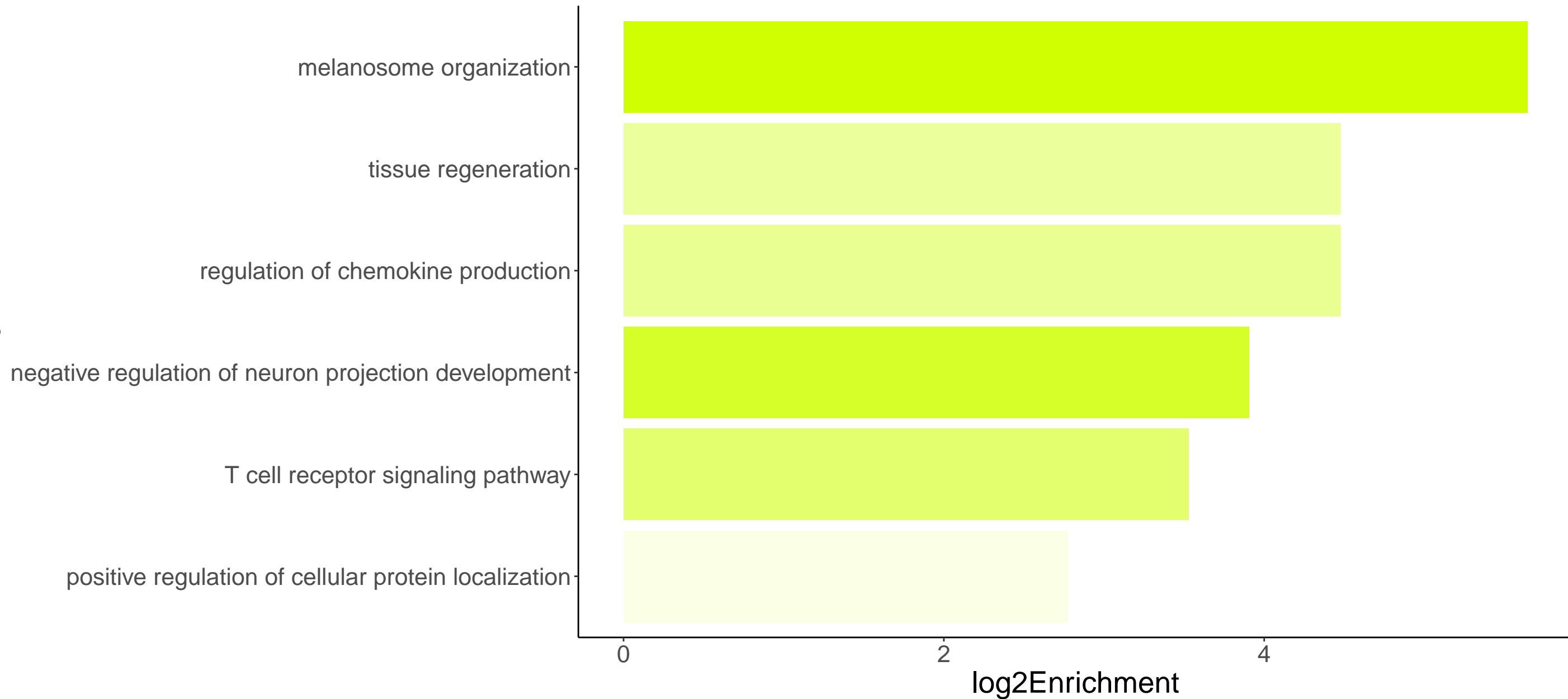
6

log2Enrichment



Re-clustered module 9.2.7 BP enrichment

Term



Re-clustered module 9.2.7 MF enrichment

Term

extracellular matrix structural constituent

actin filament binding

0

1

2

3

4

log2Enrichment



Re-clustered module 9.2.8 BP enrichment

Term

negative regulation of exocytosis

negative regulation of cytokine production involved in immune response

zinc ion transmembrane transport

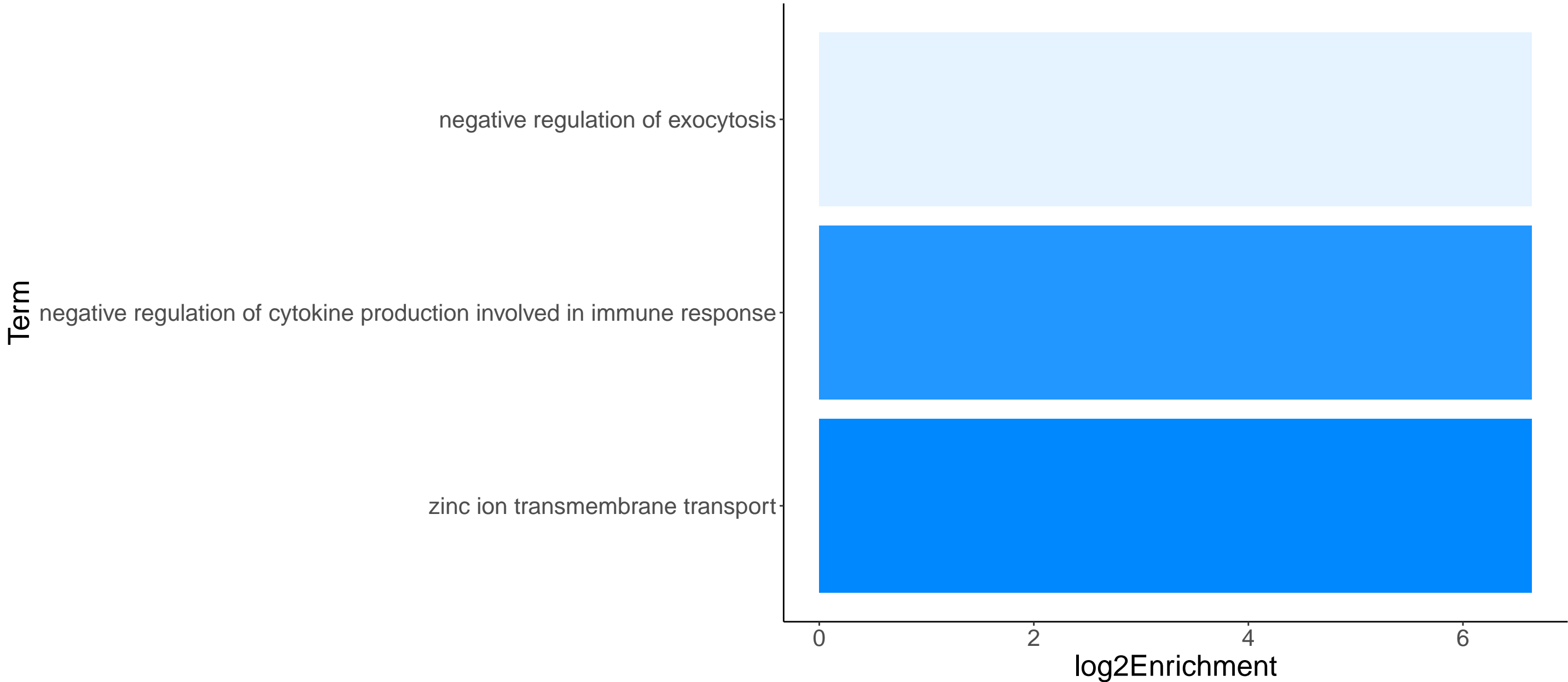
0

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log2Enrichment



Re-clustered module 9.2.8 MF enrichment

Term

hydrolase activity, hydrolyzing N-glycosyl compounds

zinc ion transmembrane transporter activity

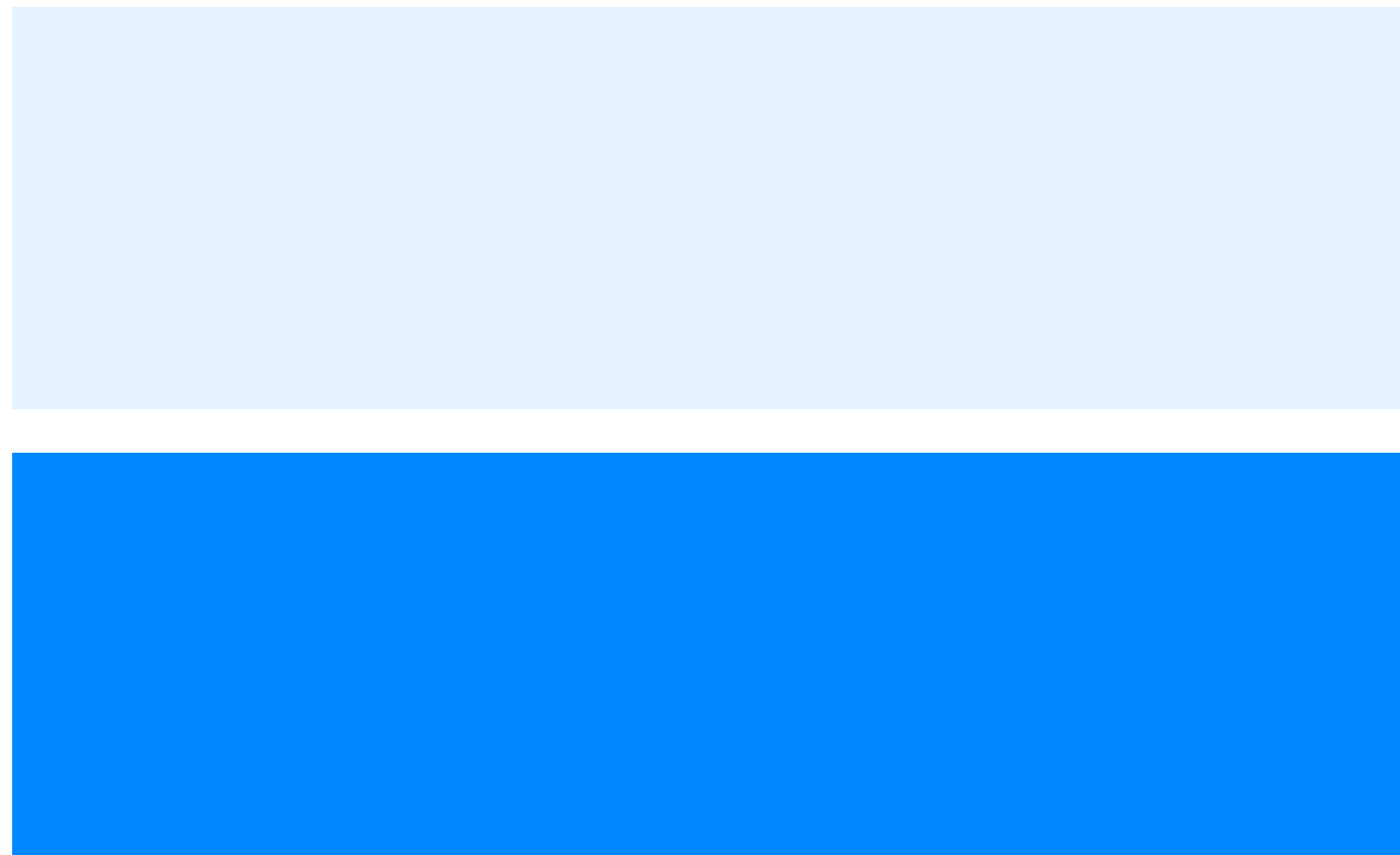
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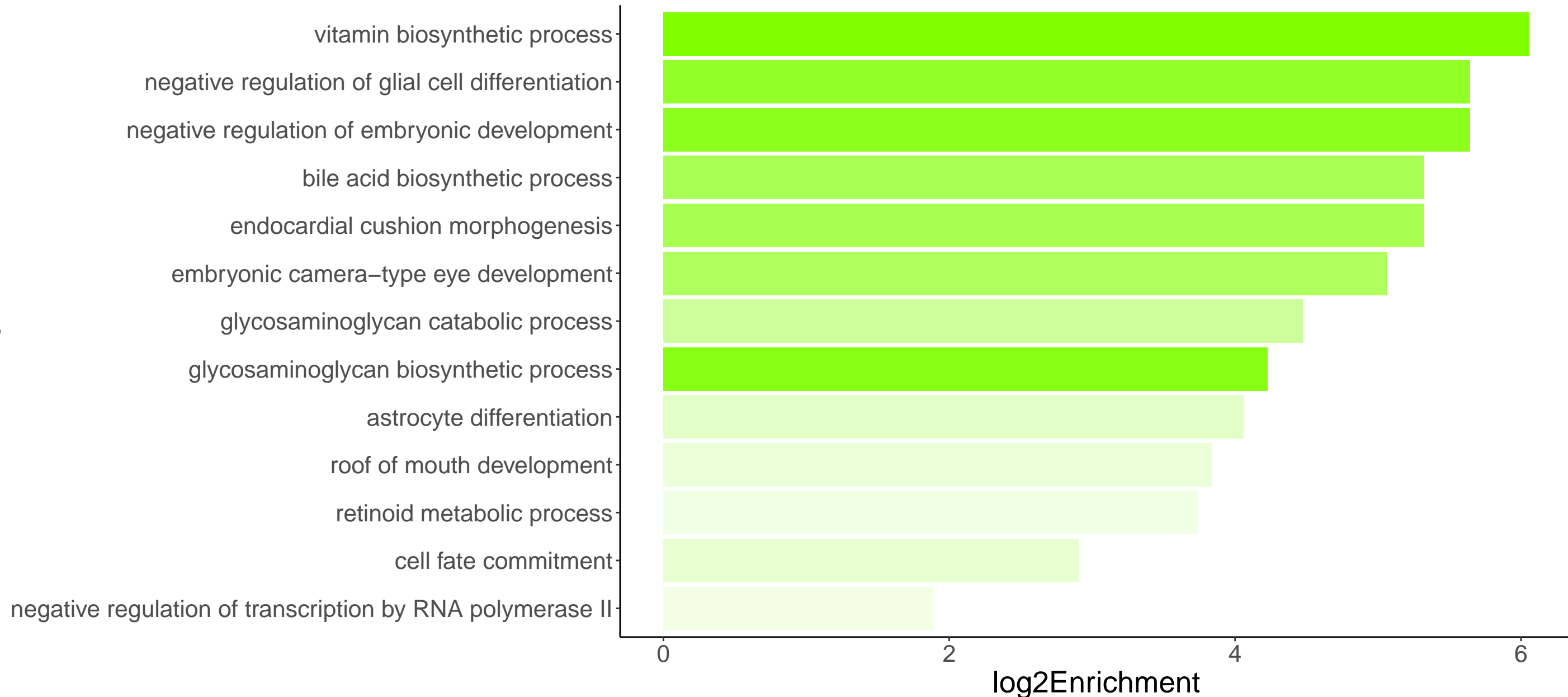
6

log2Enrichment



Re-clustered module 9.2.9 BP enrichment

Term



Term

steroid hydroxylase activity

iron ion binding

oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen

DNA-binding transcription repressor activity, RNA polymerase II-specific

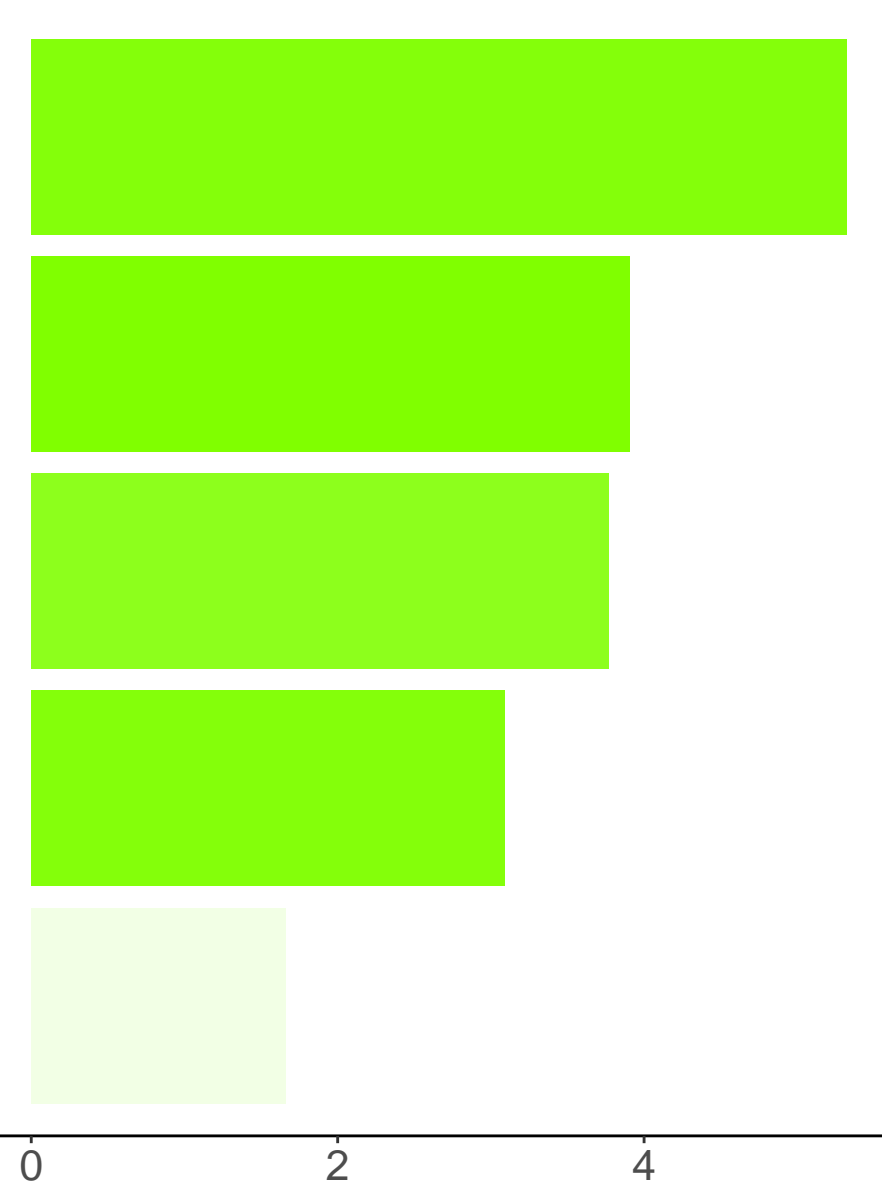
RNA polymerase II transcription regulatory region sequence-specific DNA binding

0

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log2Enrichment



Re-clustered module 9.20 BP enrichment

Term glycosaminoglycan biosynthetic process

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4

log2Enrichment



Re-clustered module 9.20 MF enrichment

Term

collagen binding

extracellular matrix structural constituent

0

2

4

log2Enrichment



Re-clustered module 9.3.1 BP enrichment

Term

protein localization to chromosome, centromeric region

steroid hormone secretion

mesodermal cell differentiation

DNA methylation

negative regulation of cell-substrate adhesion

vasculogenesis

substrate adhesion-dependent cell spreading

positive regulation of transcription, DNA-templated

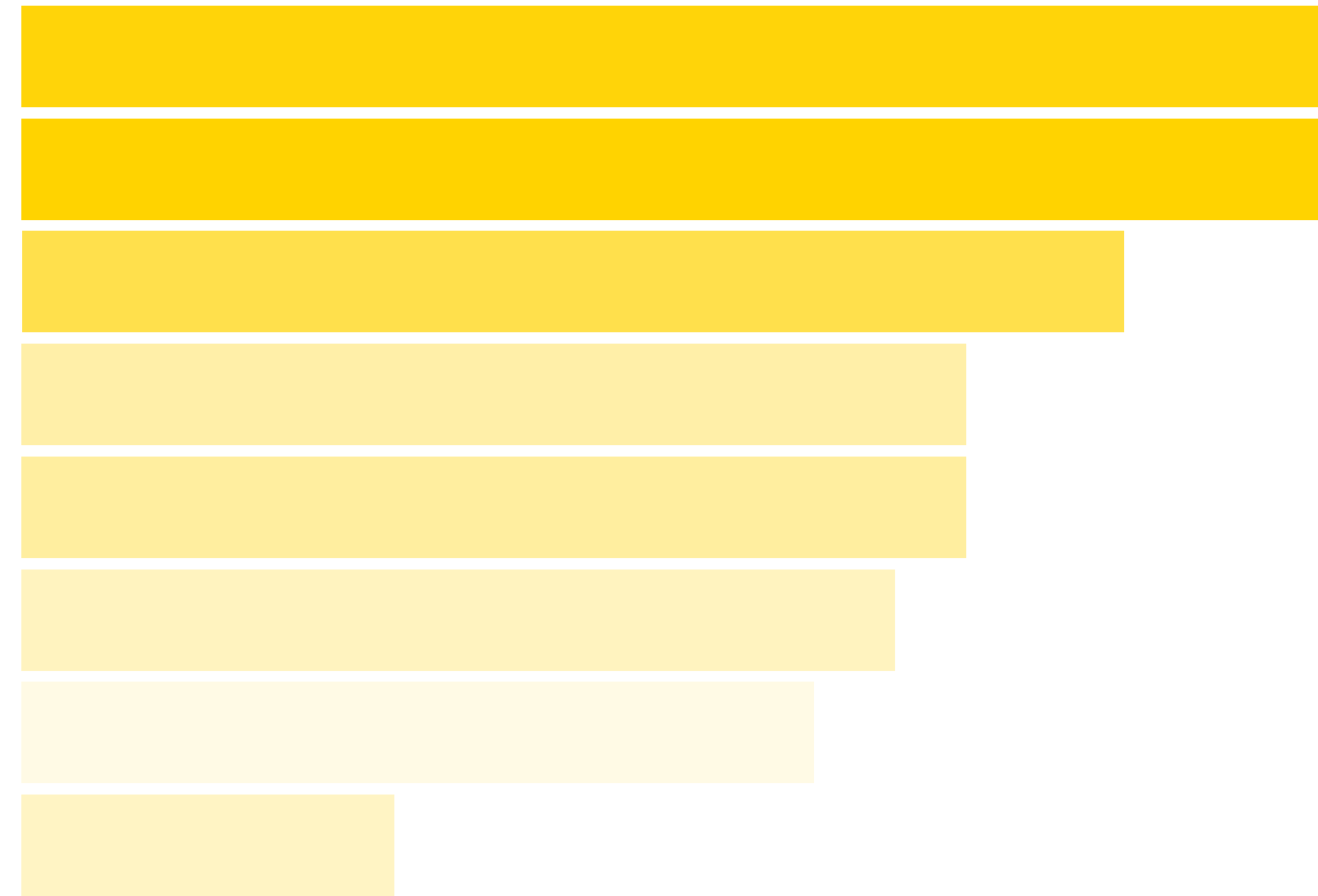
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log2Enrichment



Re-clustered module 9.3.1 MF enrichment

Term

chromatin DNA binding

dioxygenase activity

ATP binding

0

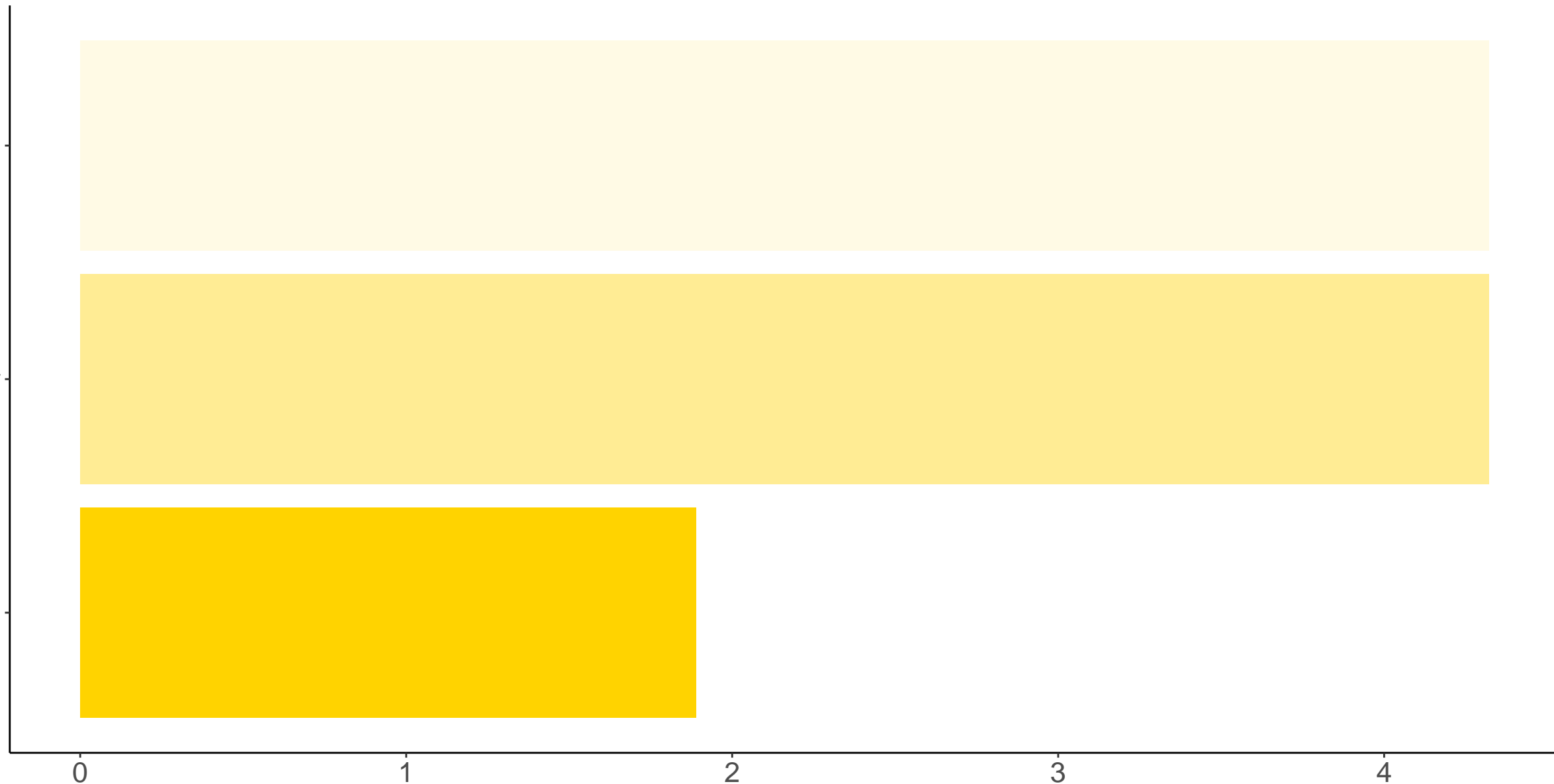
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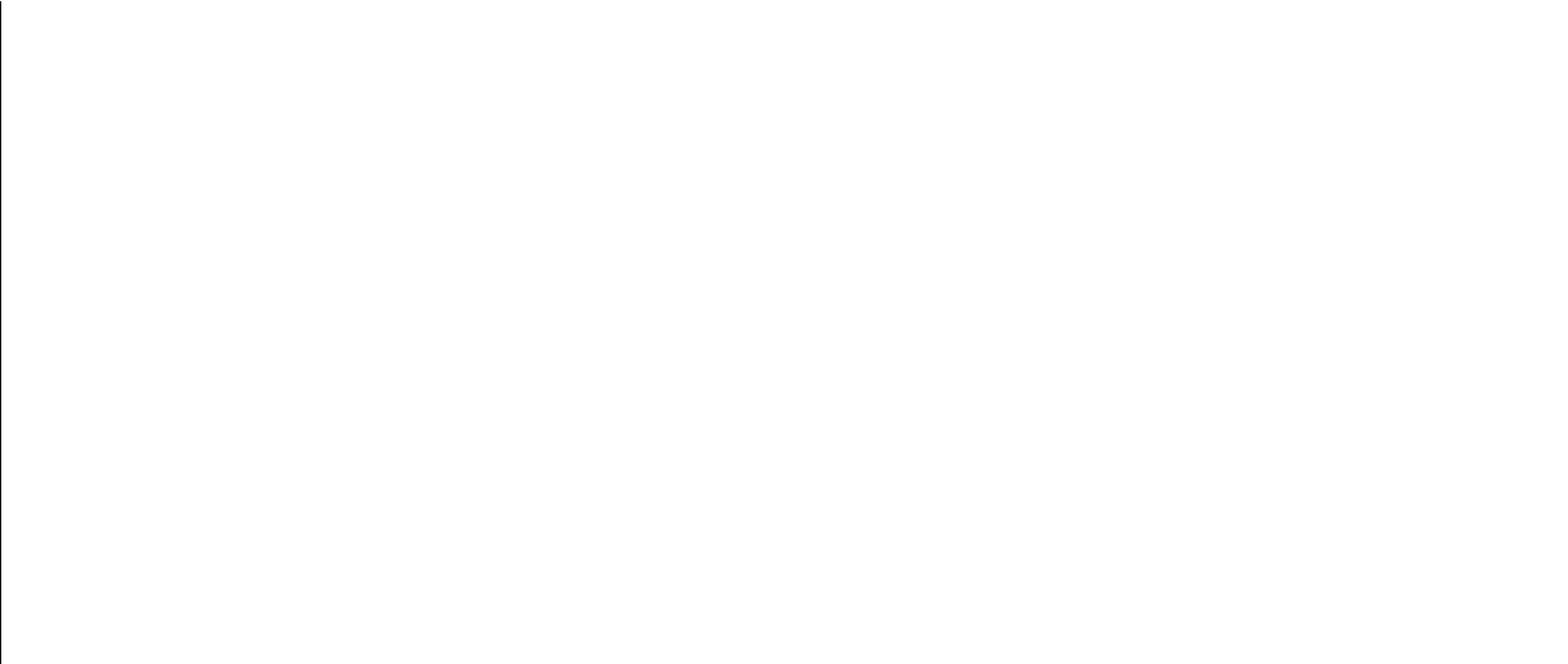
log2Enrichment



Re-clustered module 9.3.10 BP enrichment

Term

log2Enrichment



Re-clustered module 9.3.10 MF enrichment

Term

log2Enrichment



Re-clustered module 9.3.2 BP enrichment

Term

negative regulation of dendrite development

vasculogenesis

actin cytoskeleton reorganization

neuron migration

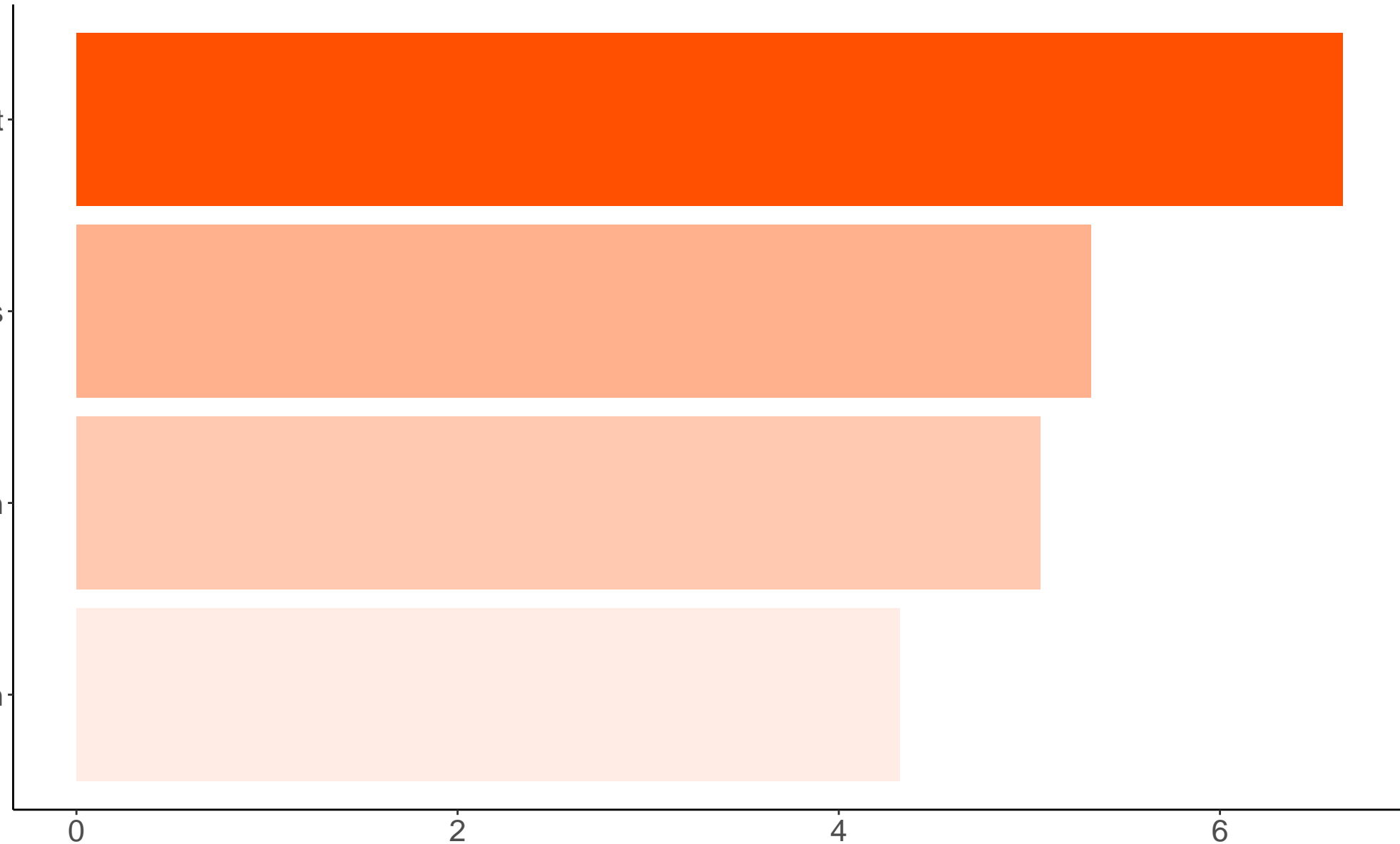
0

2

4

6

log2Enrichment



Re-clustered module 9.3.2 MF enrichment

Term

non-membrane spanning protein tyrosine kinase activity

GTPase activator activity

nucleoside phosphate binding

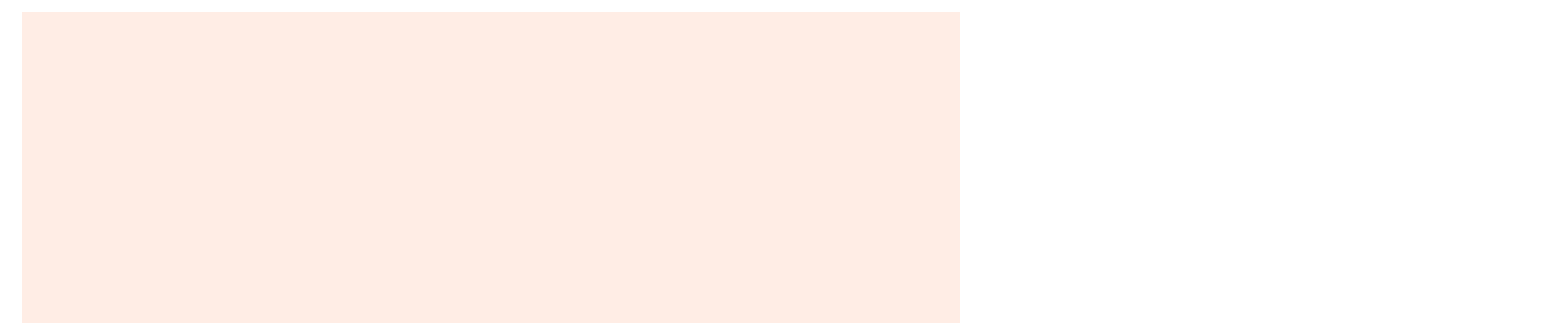
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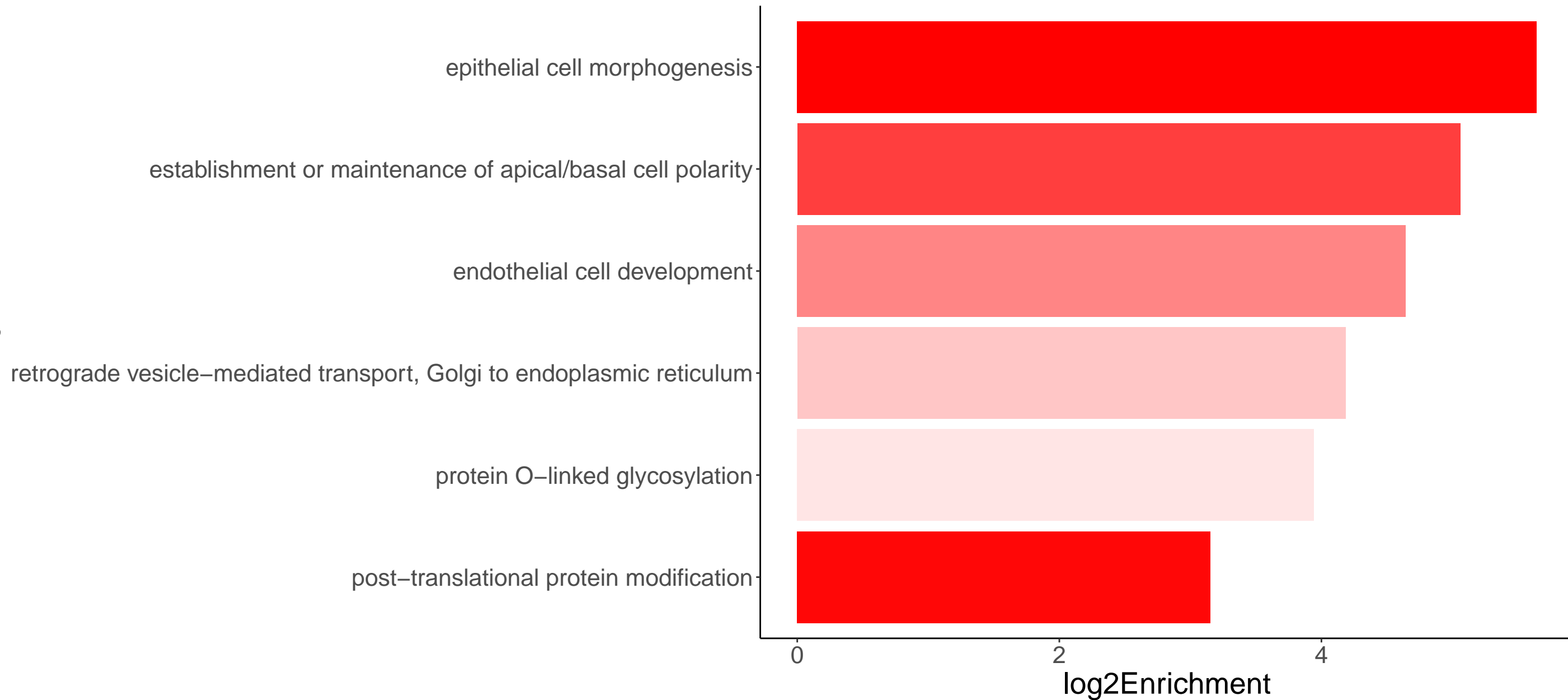
6

log2Enrichment



Re-clustered module 9.3.3 BP enrichment

Term



Re-clustered module 9.3.3 MF enrichment

Term

collagen binding

iron ion binding

0

1

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3

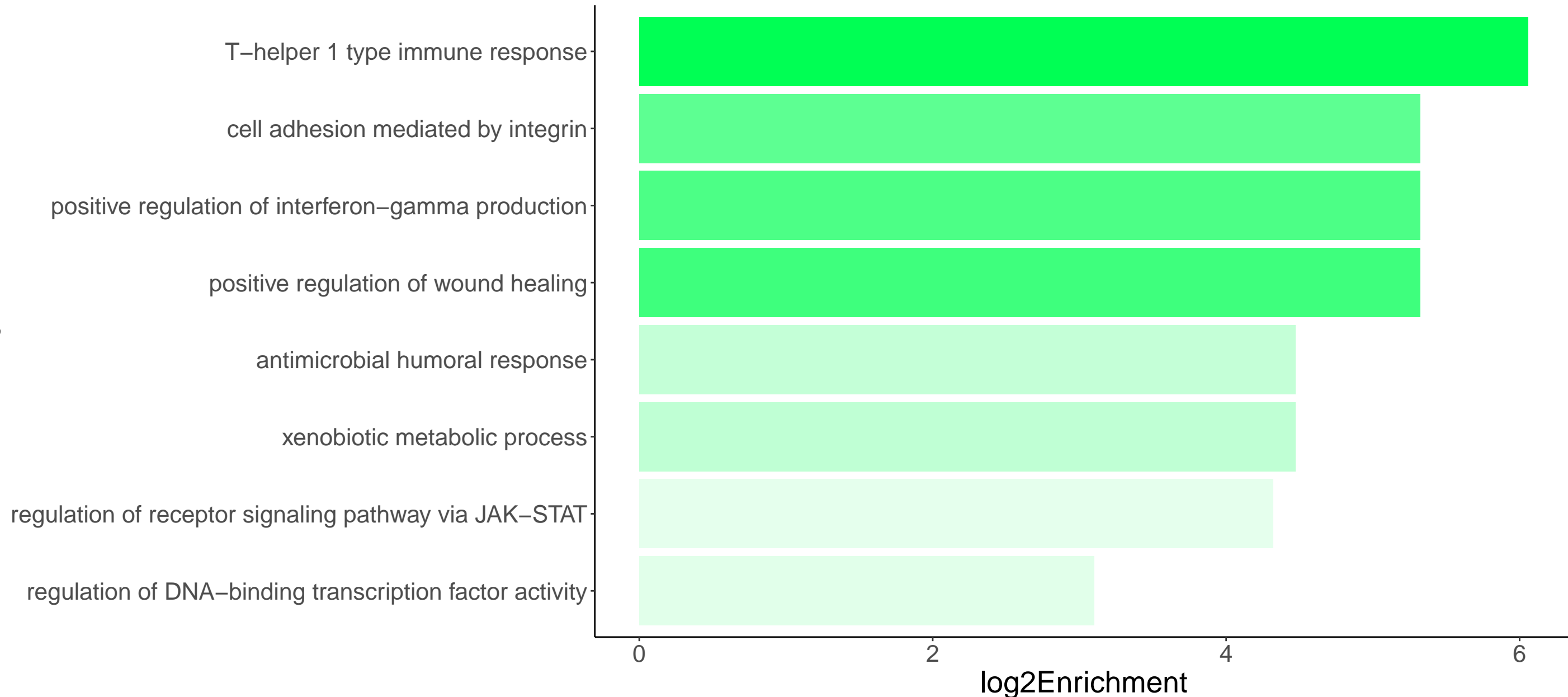
4

log2Enrichment



Re-clustered module 9.3.4 BP enrichment

Term



Re-clustered module 9.3.4 MF enrichment

Term

cytokine binding

growth factor binding

heme binding

0

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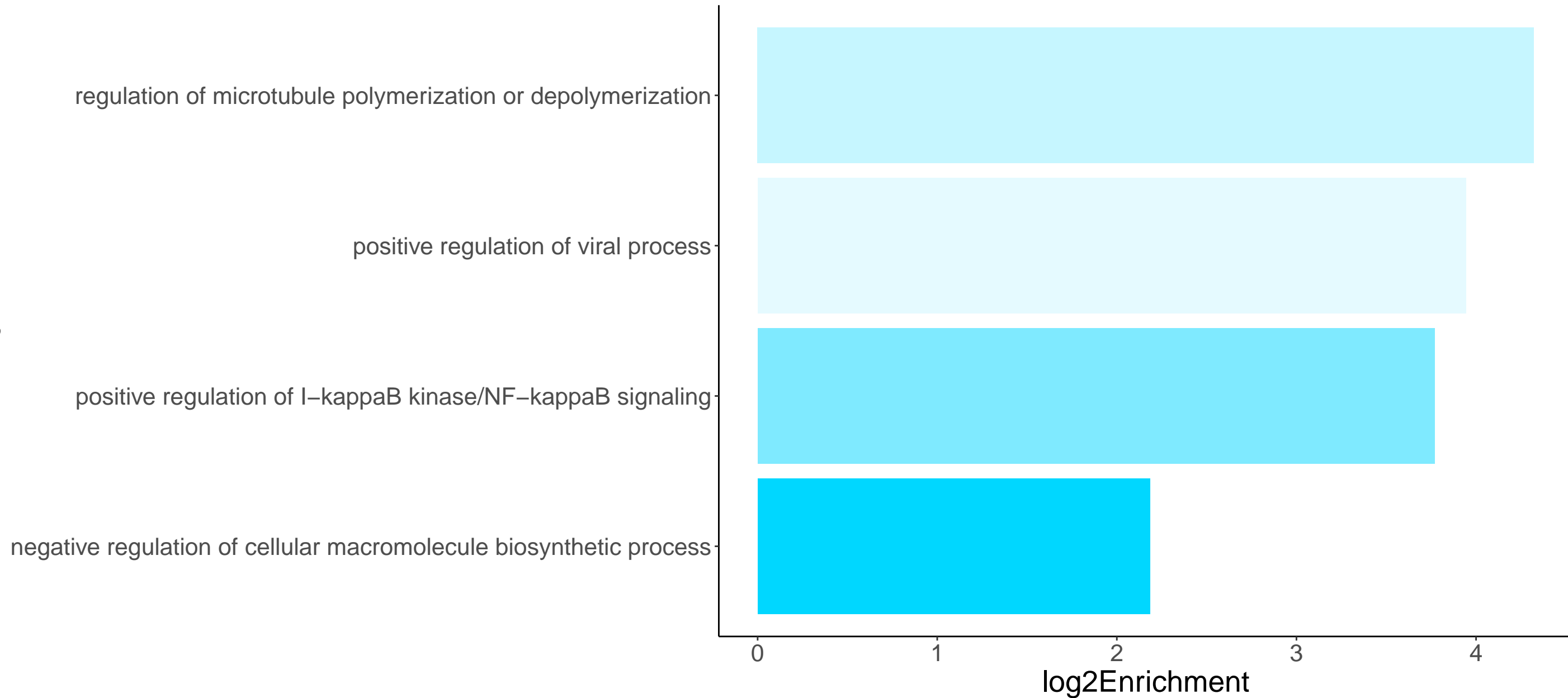
4

log2Enrichment



Re-clustered module 9.3.5 BP enrichment

Term



Re-clustered module 9.3.5 MF enrichment

Term

log2Enrichment



Re-clustered module 9.3.6 BP enrichment

Term

negative regulation of blood vessel endothelial cell migration

ceramide biosynthetic process

endothelium development

Rho protein signal transduction

0

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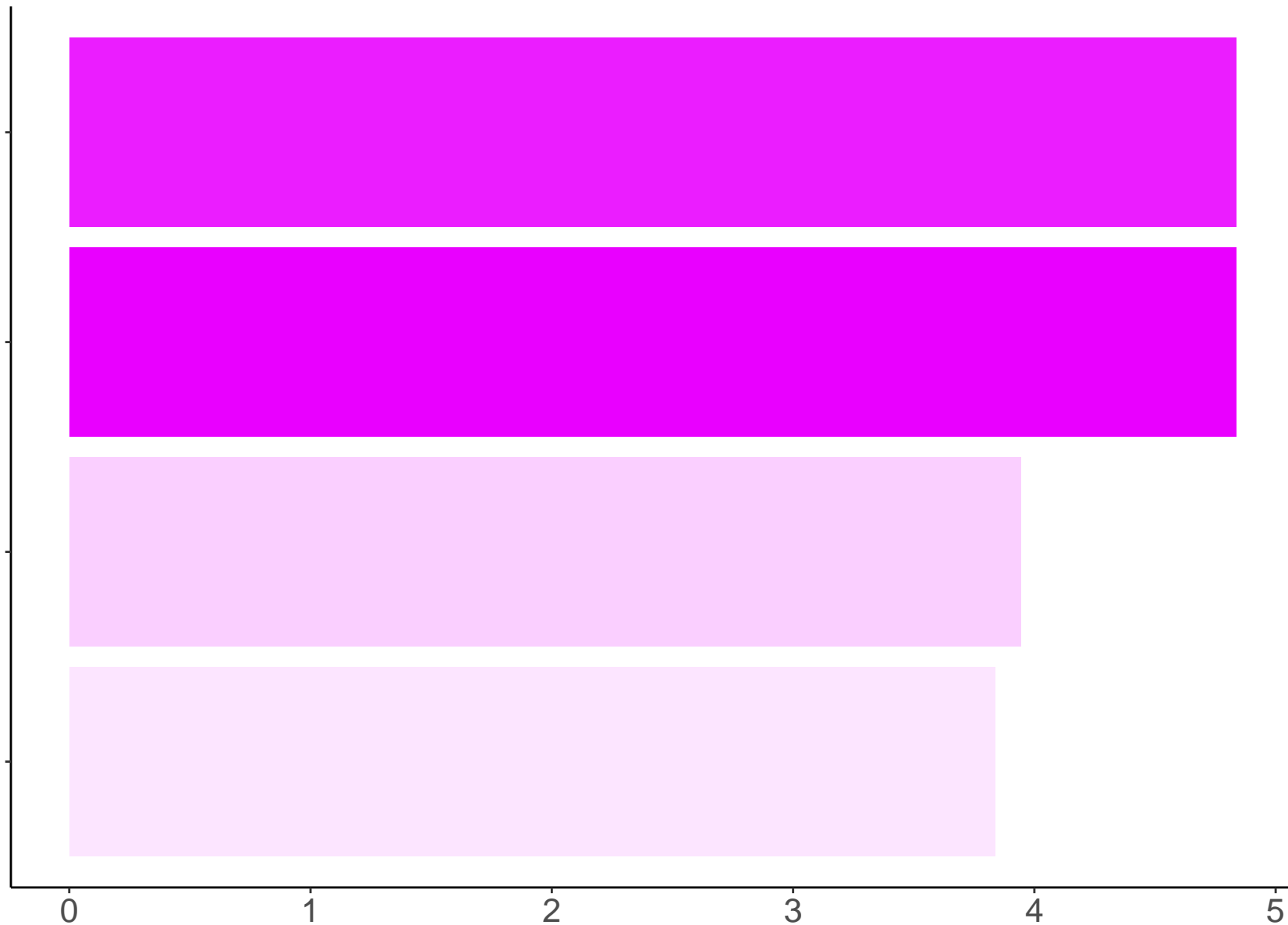
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log2Enrichment



Re-clustered module 9.3.6 MF enrichment

Term

ribonucleoprotein complex binding

metal ion binding

0

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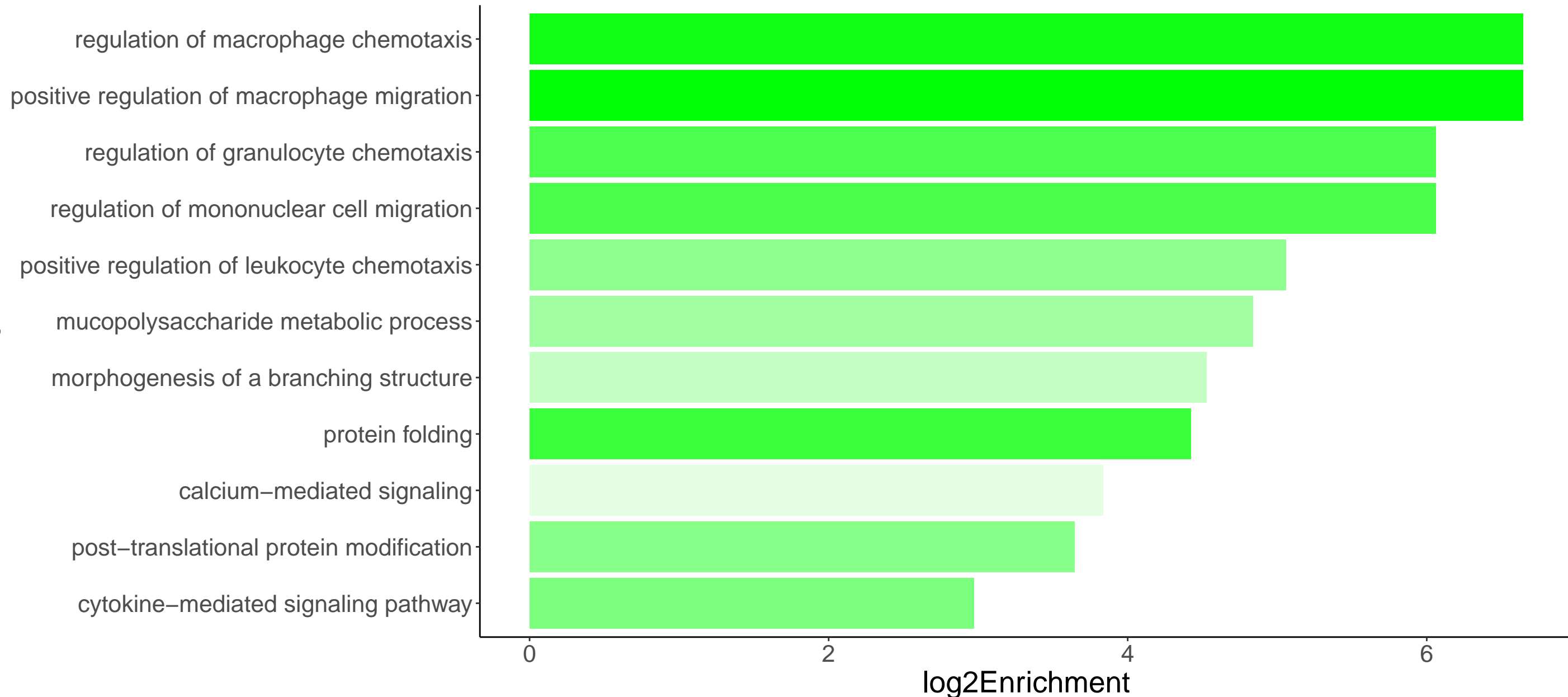
4

log2Enrichment



Re-clustered module 9.3.7 BP enrichment

Term



Re-clustered module 9.3.7 MF enrichment

Term

monosaccharide binding

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4

log2Enrichment



Re-clustered module 9.3.9 BP enrichment

Term

ceramide biosynthetic process

plasma membrane organization

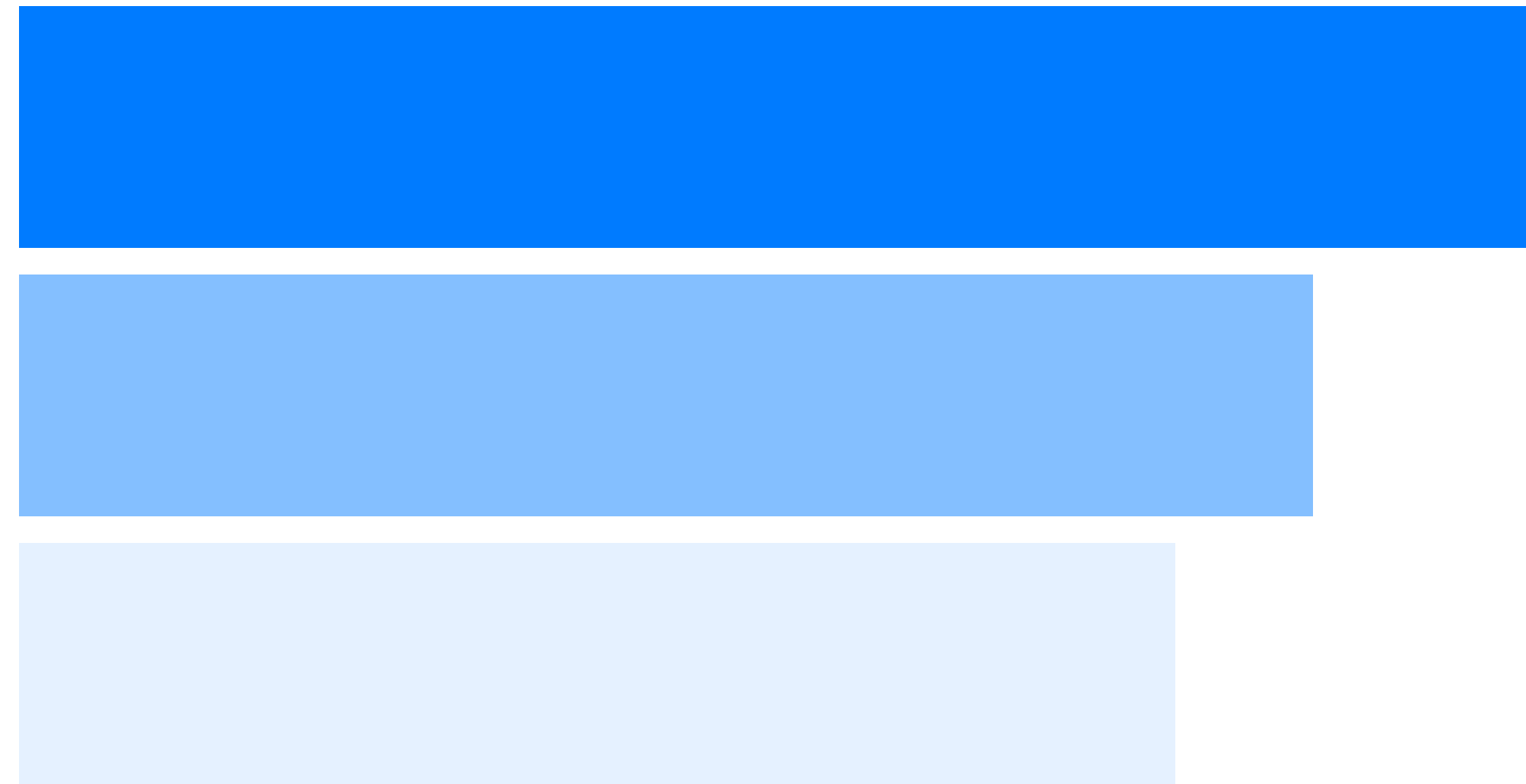
electron transport chain

0

2

4

log2Enrichment



Re-clustered module 9.3.9 MF enrichment

Term

electron transfer activity

cadherin binding

0

1

2

3

4

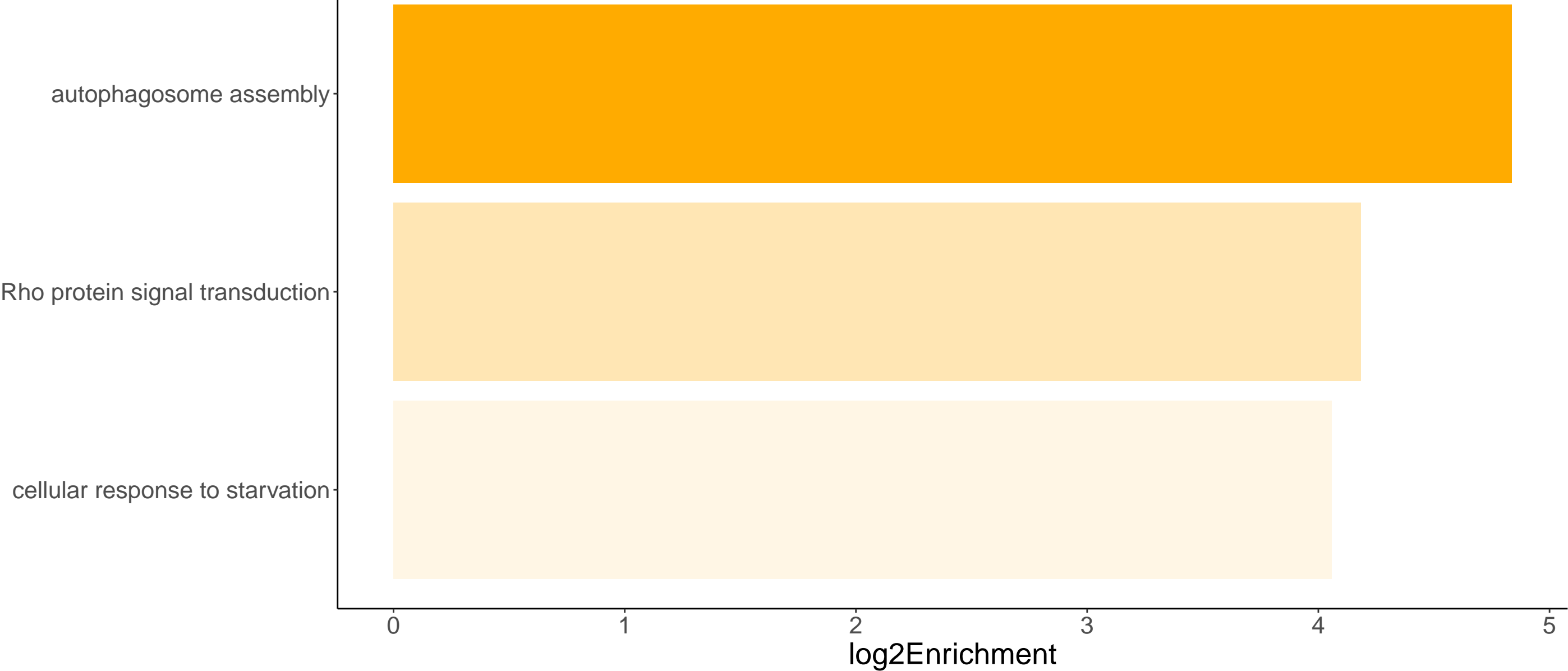
5

log2Enrichment



Re-clustered module 9.4.1 BP enrichment

Term



Re-clustered module 9.4.1 MF enrichment

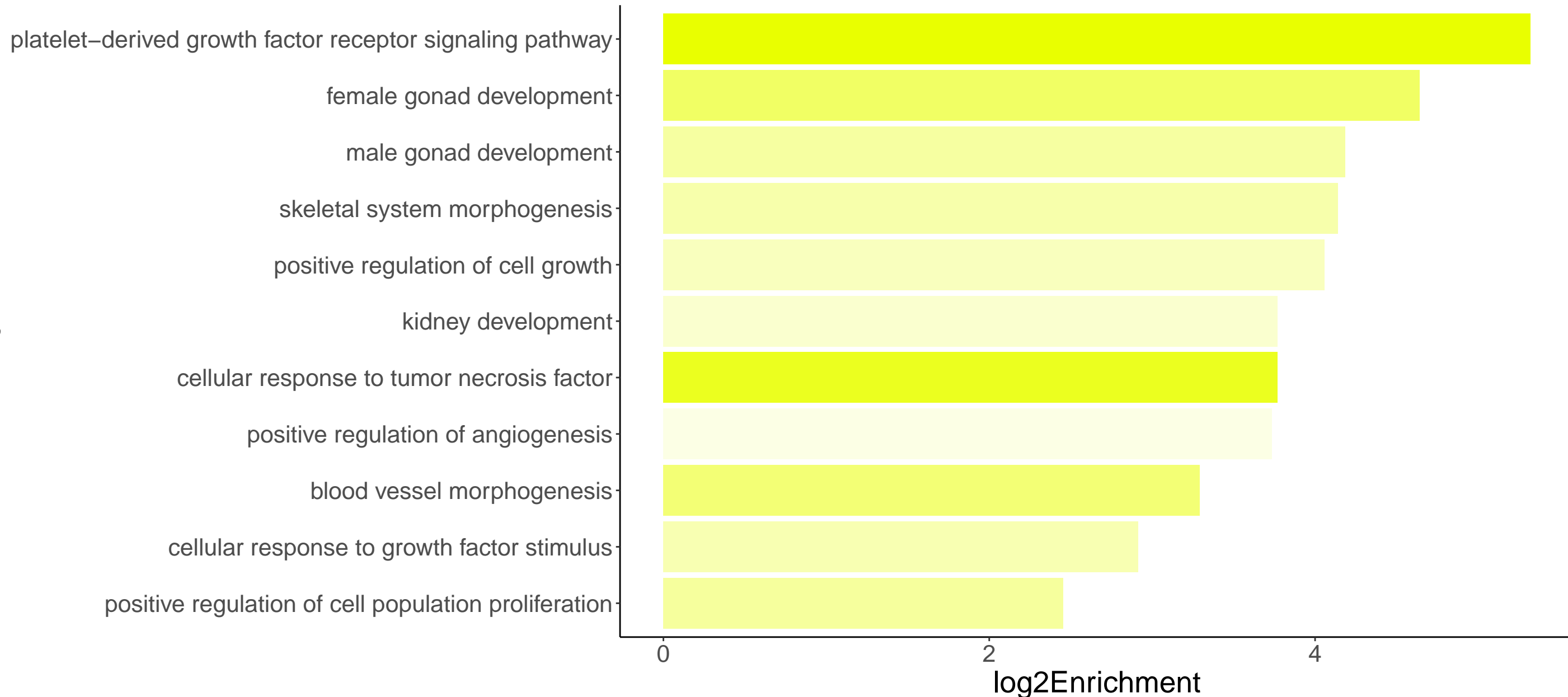
Term

log2Enrichment



Re-clustered module 9.4.3 BP enrichment

Term



Re-clustered module 9.4.3 MF enrichment

Term

cytokine binding

0

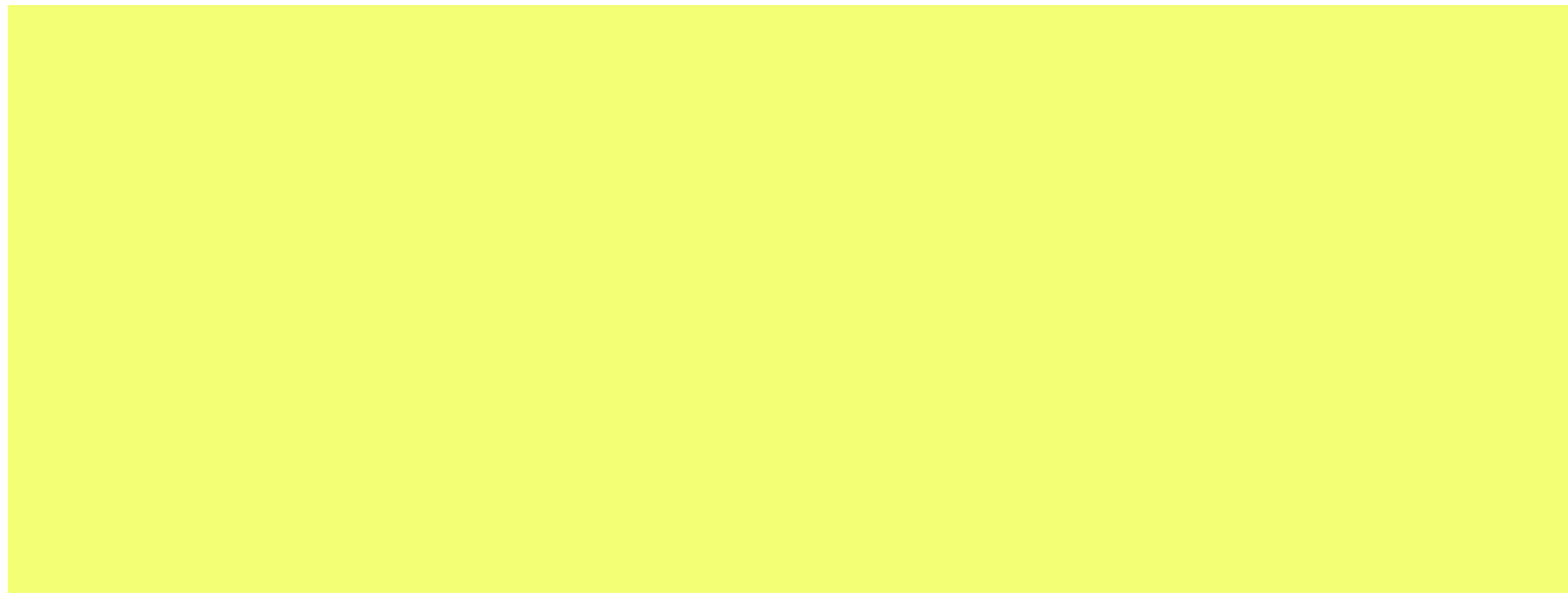
1

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3

4

log2Enrichment



Re-clustered module 9.4.4 BP enrichment

Term

antigen processing and presentation of exogenous peptide antigen via MHC class II

endoplasmic reticulum to Golgi vesicle-mediated transport

positive regulation of BMP signaling pathway

ciliary basal body-plasma membrane docking

0

2

4

log2Enrichment



Re-clustered module 9.4.4 MF enrichment

Term

unfolded protein binding

0

1

2

3

4

log2Enrichment



Re-clustered module 9.4.5 BP enrichment

Term

cellular metabolic compound salvage

GTP metabolic process

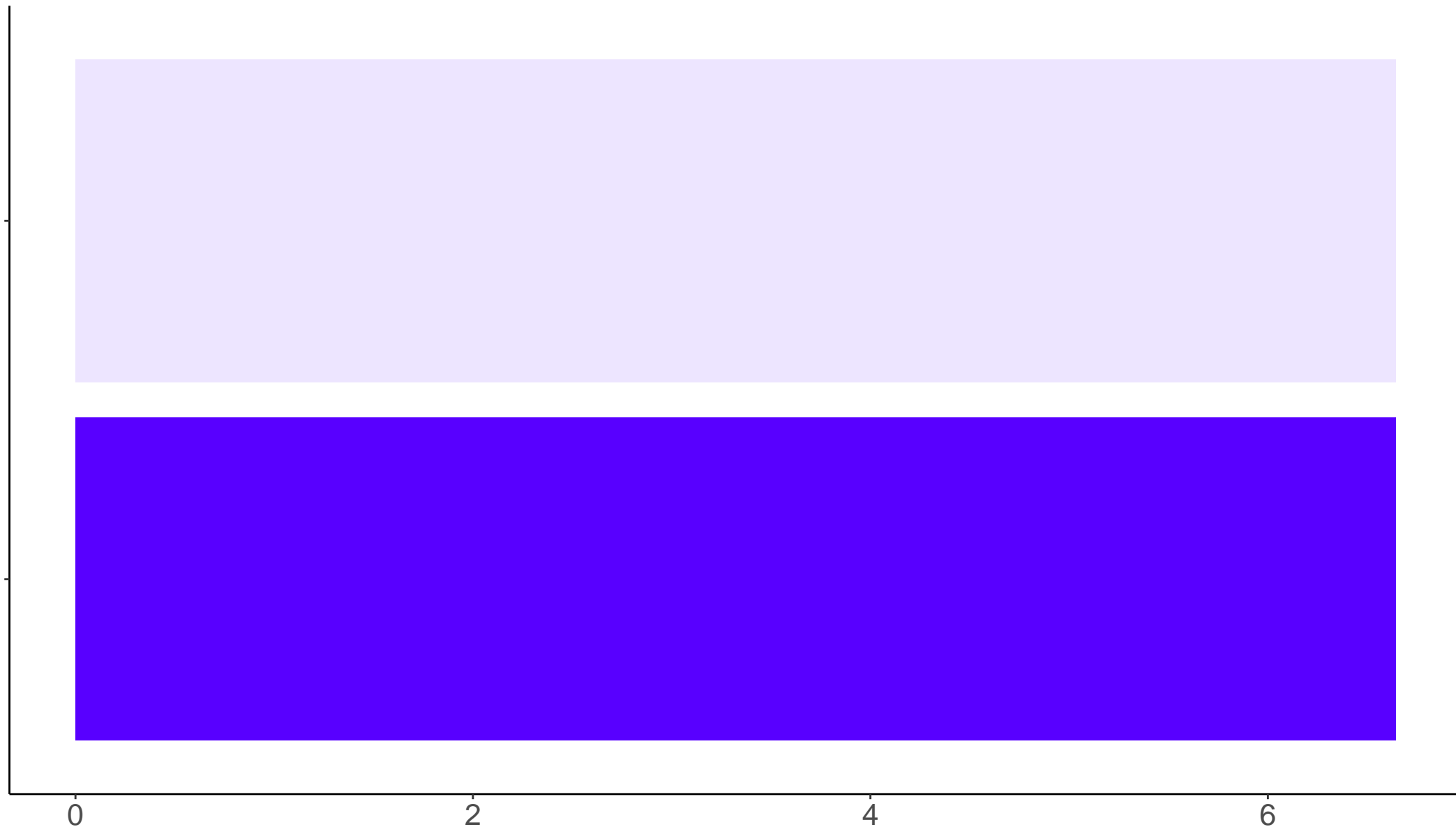
0

2

4

6

log2Enrichment



Re-clustered module 9.4.5 MF enrichment

Term

log2Enrichment



Re-clustered module 9.4.7 BP enrichment

Term

positive regulation of neuron projection development

0

1

2

3

4

log2Enrichment



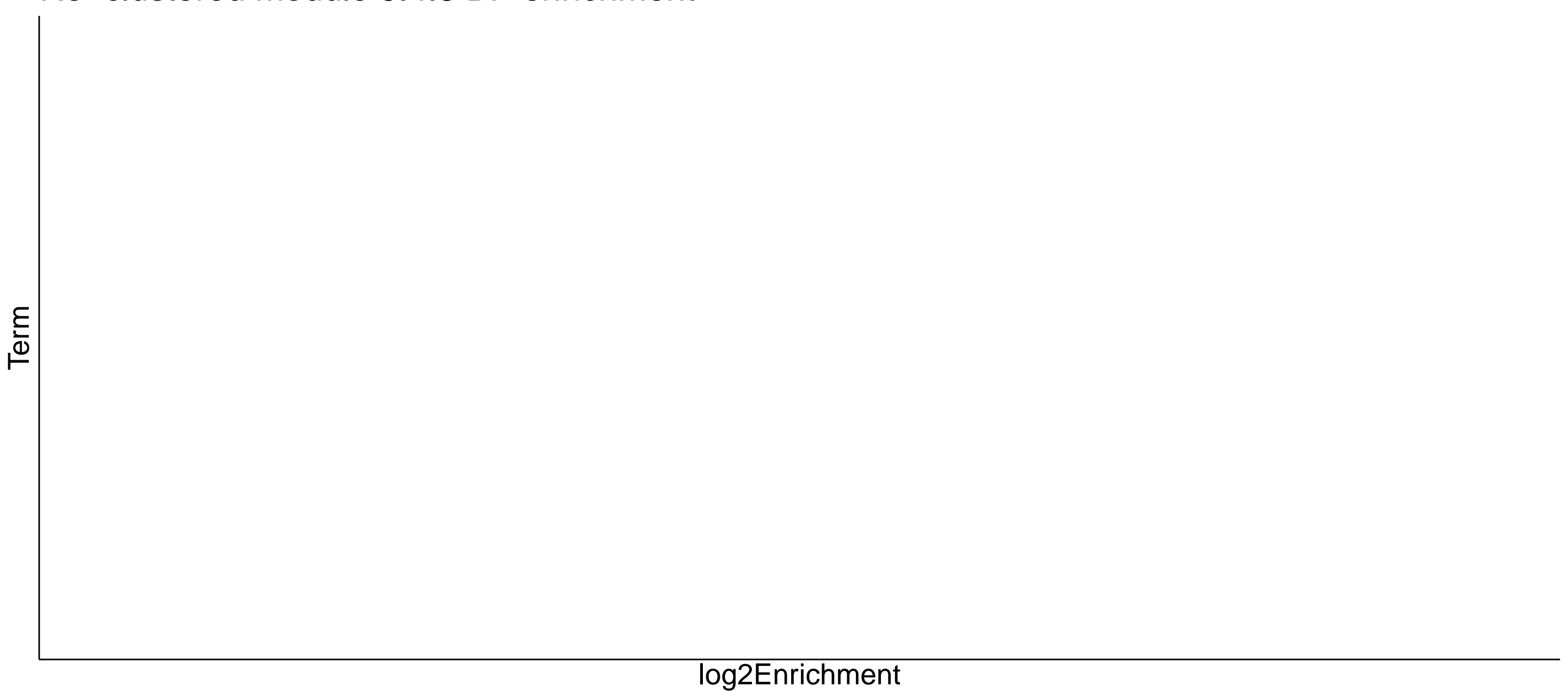
Re-clustered module 9.4.7 MF enrichment

Term

log2Enrichment



Re-clustered module 9.4.8 BP enrichment



Re-clustered module 9.4.8 MF enrichment

Term

Rab GTPase binding

0

1

2

3

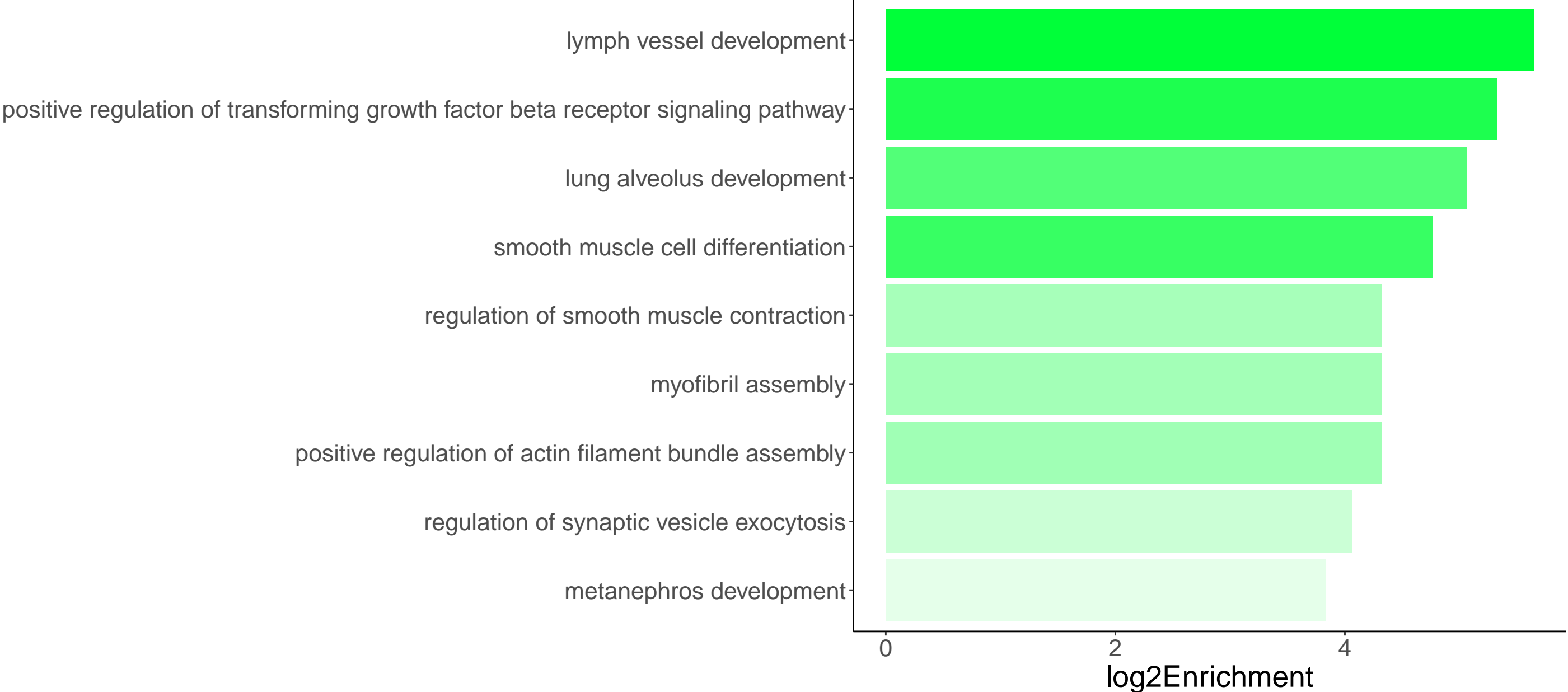
4

log2Enrichment



Re-clustered module 9.5.1 BP enrichment

Term



Re-clustered module 9.5.1 MF enrichment

Term

acetylcholine receptor activity

0

2

4

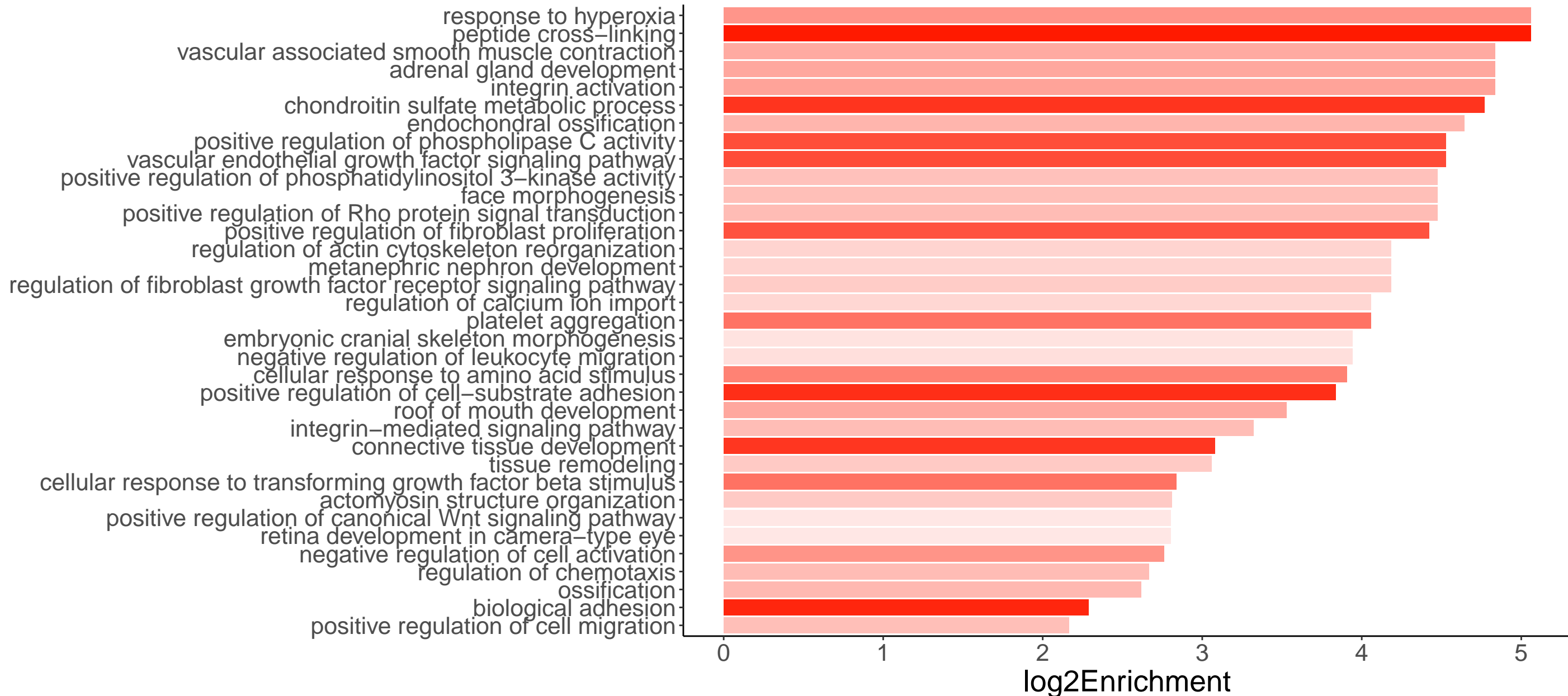
6

log2Enrichment



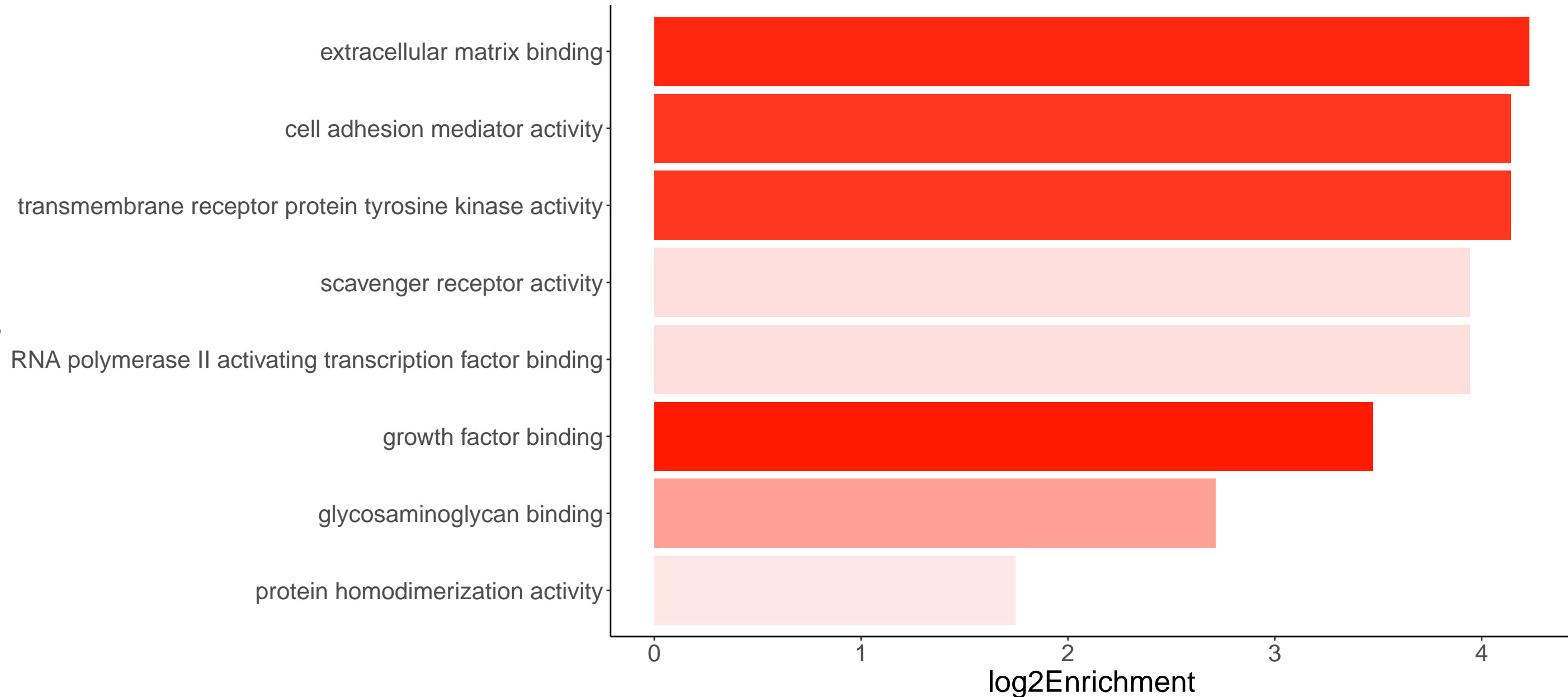
Re-clustered module 9.5.10 BP enrichment

Term



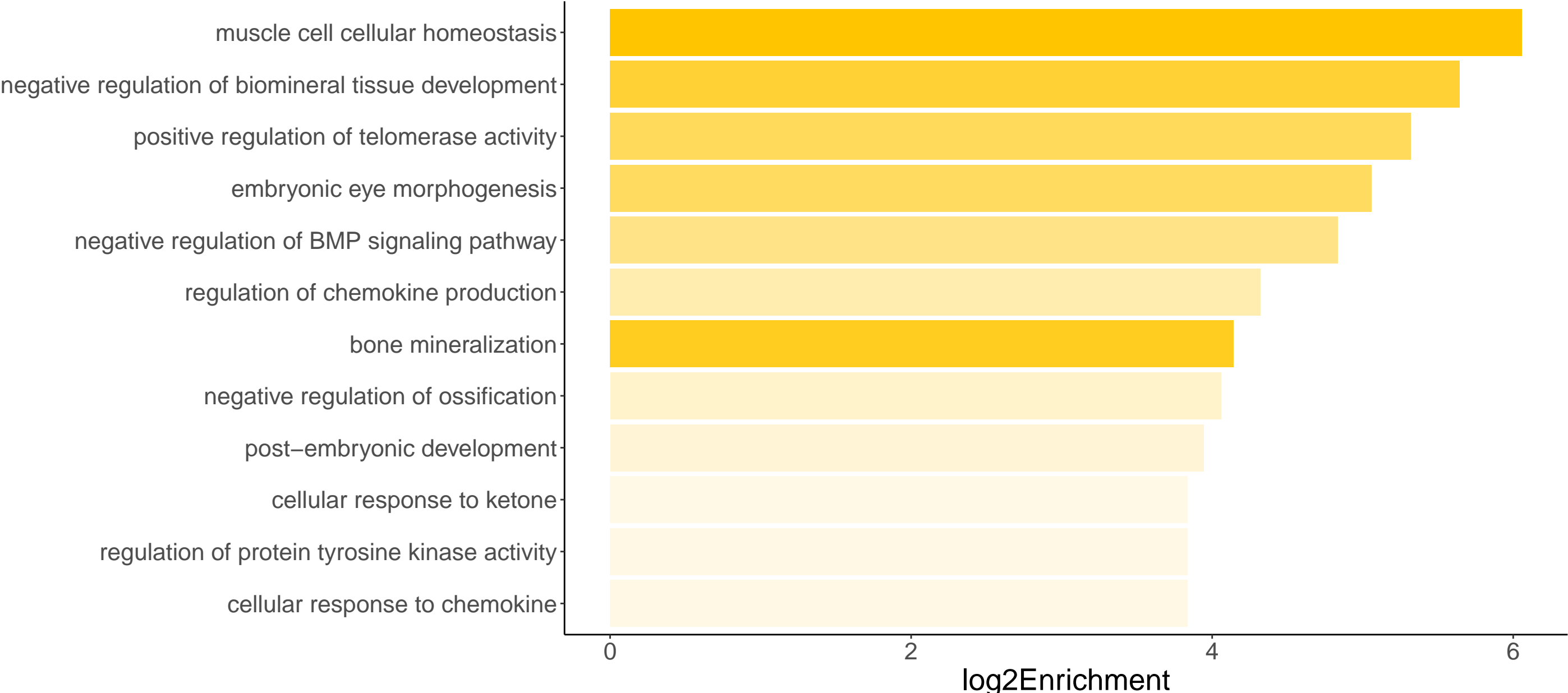
Re-clustered module 9.5.10 MF enrichment

Term



Re-clustered module 9.5.2 BP enrichment

Term



Re-clustered module 9.5.2 MF enrichment

Term

collagen binding

0

1

2

3

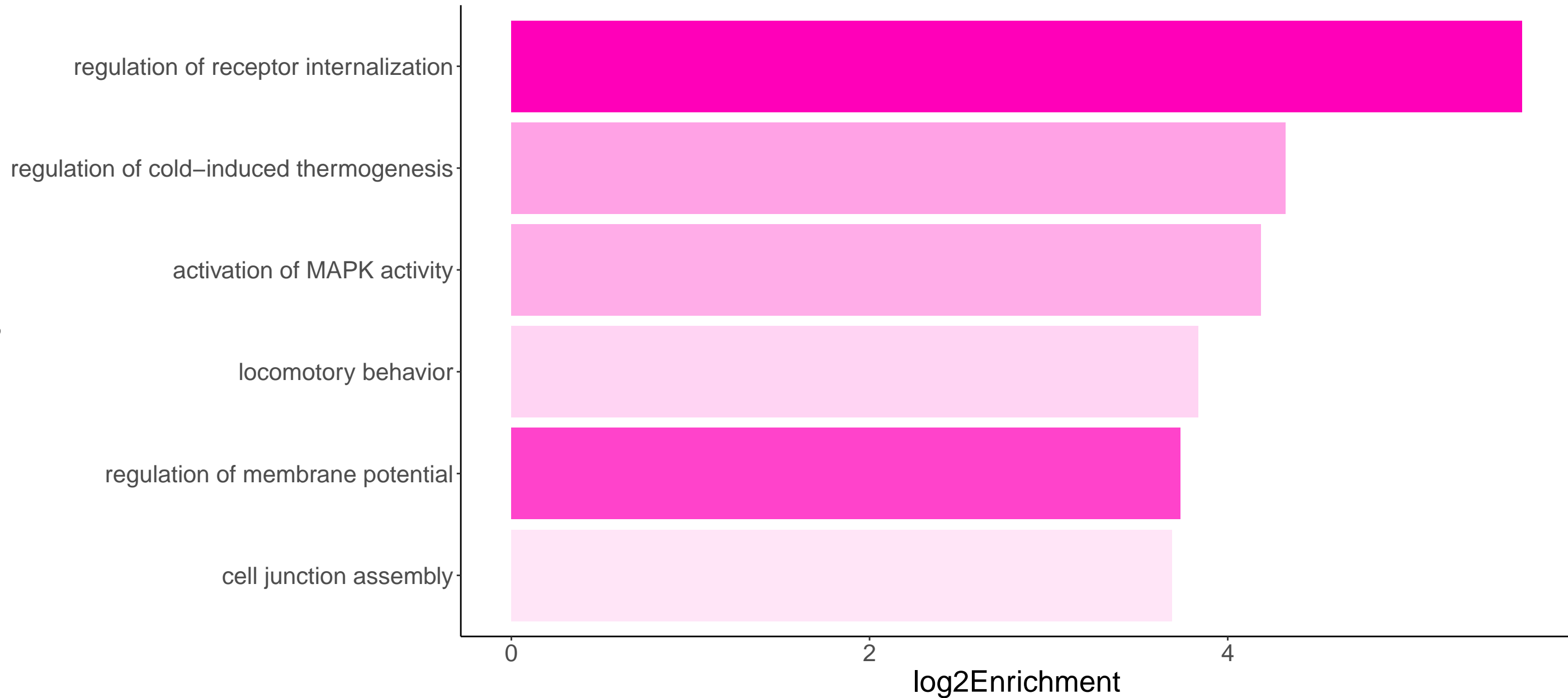
4

log2Enrichment



Re-clustered module 9.5.3 BP enrichment

Term



Re-clustered module 9.5.3 MF enrichment

Term metalloendopeptidase activity

0

1

2

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4

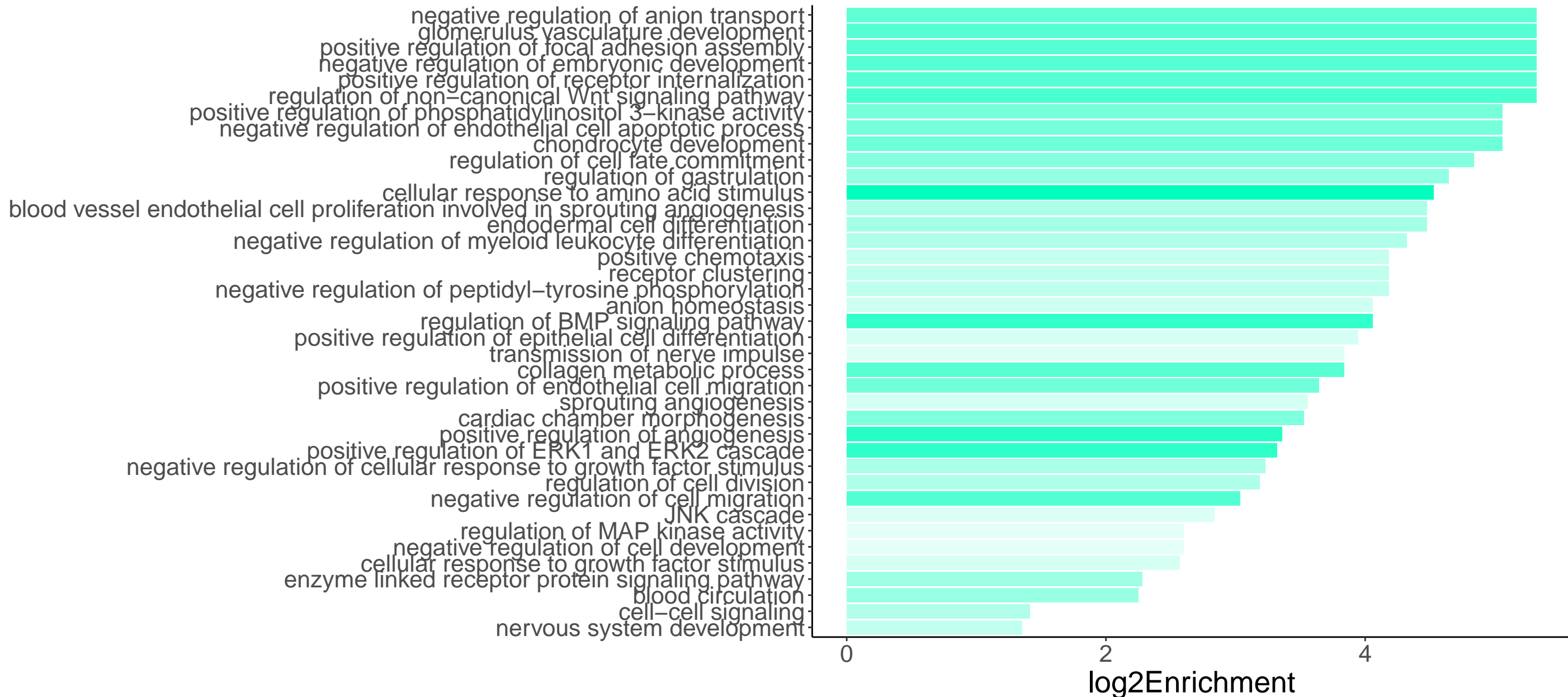
5

log2Enrichment



Re-clustered module 9.5.4 BP enrichment

Term



Re-clustered module 9.5.4 MF enrichment

Term

fibroblast growth factor receptor binding

Wnt-protein binding

SMAD binding

transmembrane receptor protein tyrosine kinase activity

integrin binding

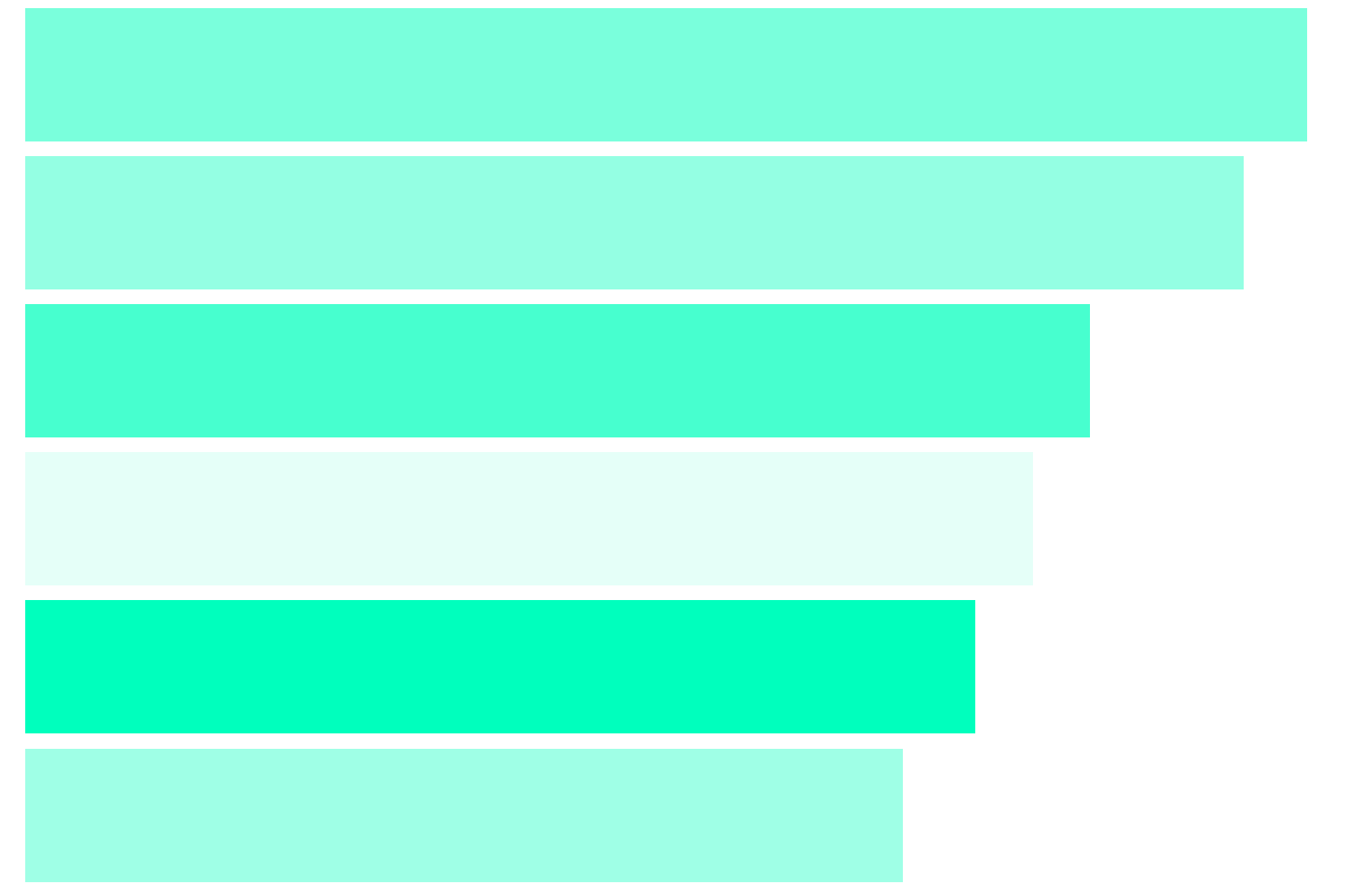
growth factor binding

0

2

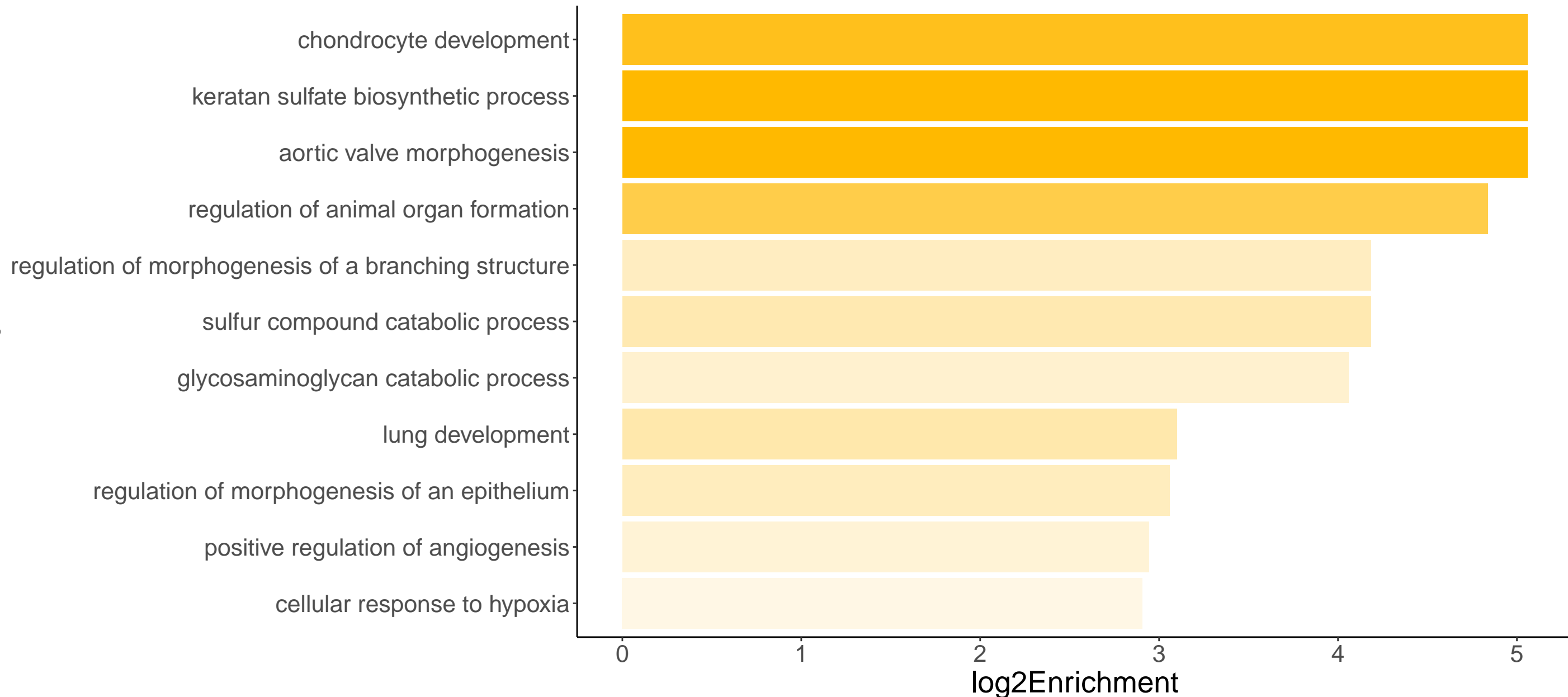
4

log2Enrichment



Re-clustered module 9.5.6 BP enrichment

Term



Re-clustered module 9.5.6 MF enrichment

Term

structural constituent of eye lens

fibroblast growth factor receptor binding

extracellular matrix binding

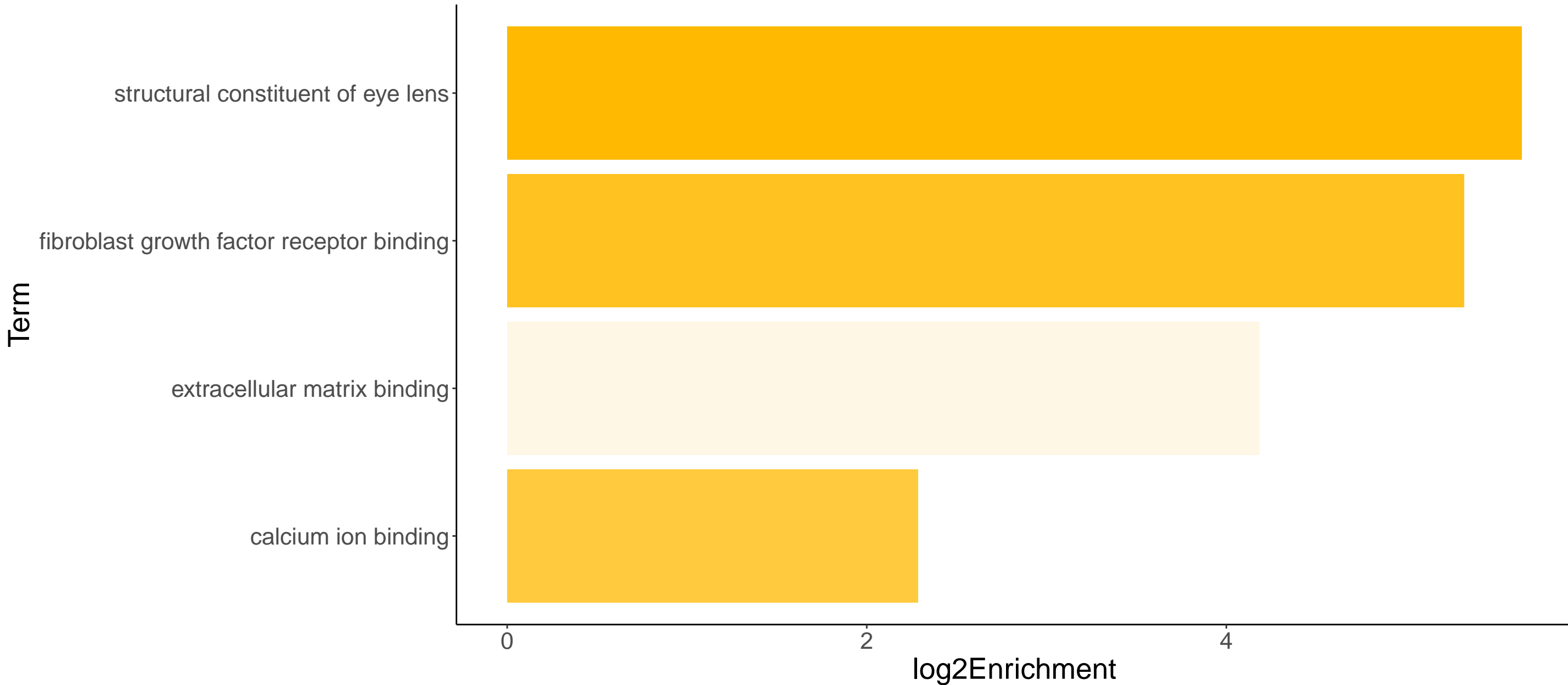
calcium ion binding

0

2

4

log2Enrichment



Re-clustered module 9.5.7 BP enrichment

Term

negative regulation of angiogenesis

cell-matrix adhesion

angiogenesis

0

1

2

3

4

log2Enrichment



Re-clustered module 9.5.7 MF enrichment

Term

glycosaminoglycan binding

0

1

2

3

4

log2Enrichment



Re-clustered module 9.5.9 BP enrichment

Term

tooth mineralization

glutamate secretion

homotypic cell-cell adhesion

regulation of biomineral tissue development

bone mineralization

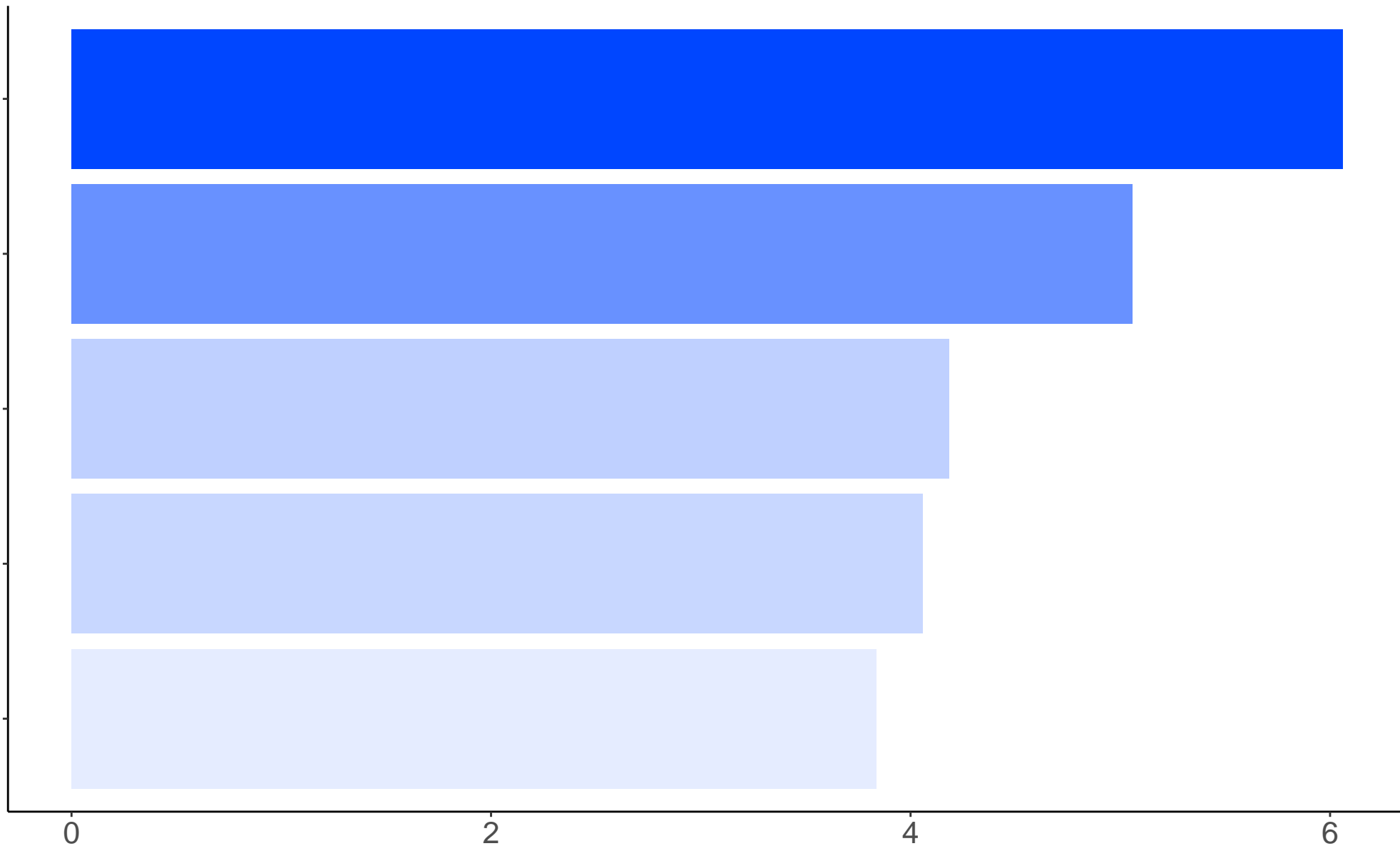
0

2

4

6

log2Enrichment



Re-clustered module 9.5.9 MF enrichment

Term

collagen binding

0

1

2

3

4

log2Enrichment



Re-clustered module 9.6 BP enrichment

Term

prostate gland epithelium morphogenesis

response to testosterone

positive regulation of phosphatidylinositol 3-kinase signaling

morphogenesis of a branching epithelium

anterior/posterior pattern specification

cell-matrix adhesion

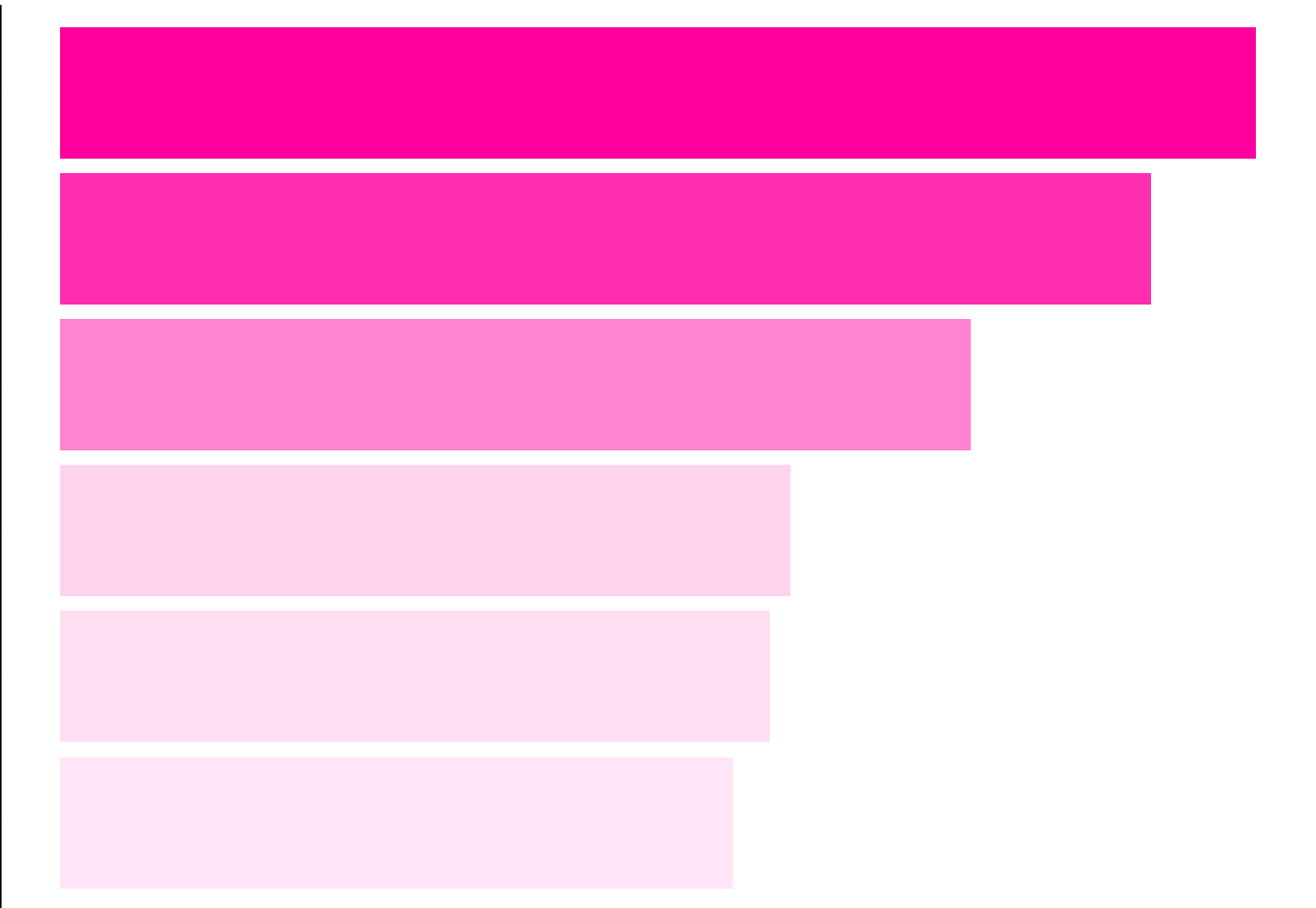
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2

4

6

log2Enrichment



Re-clustered module 9.6 MF enrichment

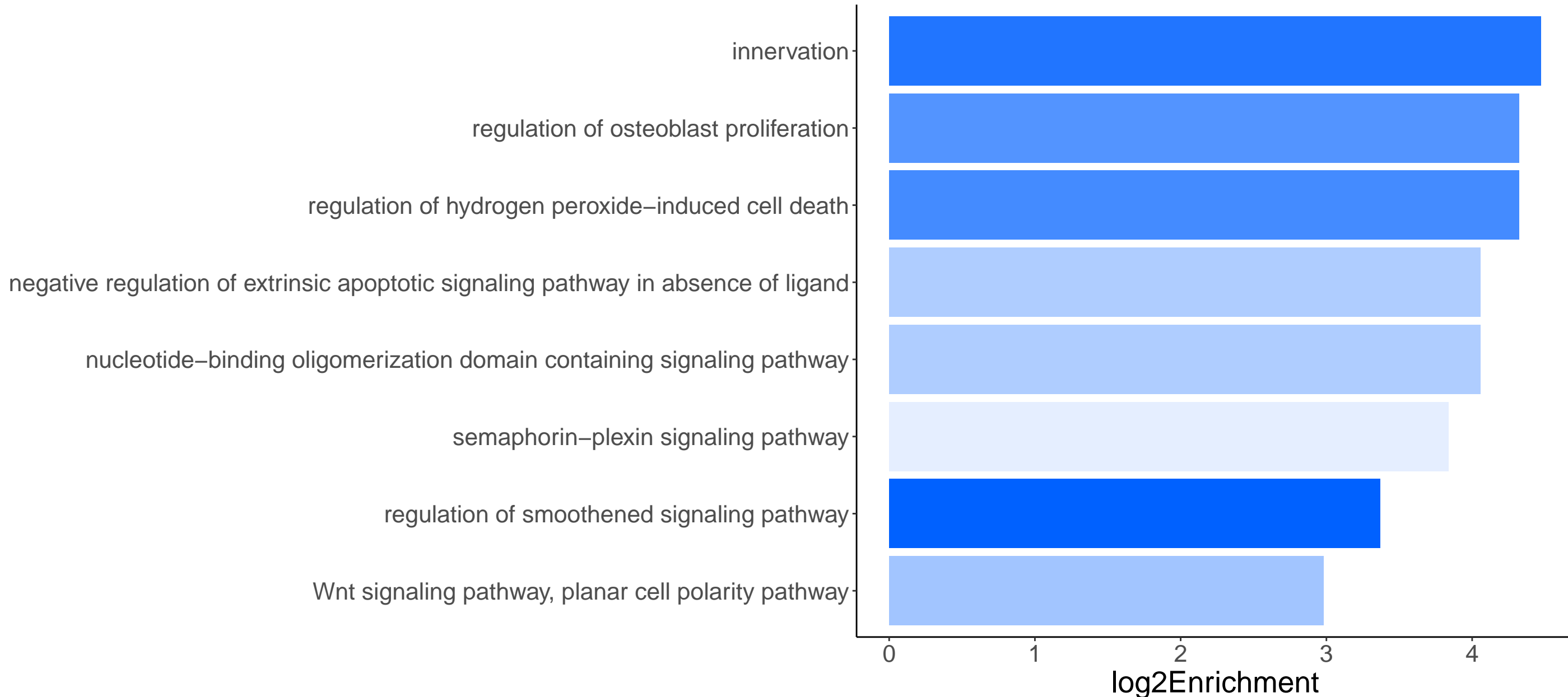
Term

log2Enrichment



Re-clustered module 9.7 BP enrichment

Term



Re-clustered module 9.7 MF enrichment

Term

Wnt-protein binding

frizzled binding

0

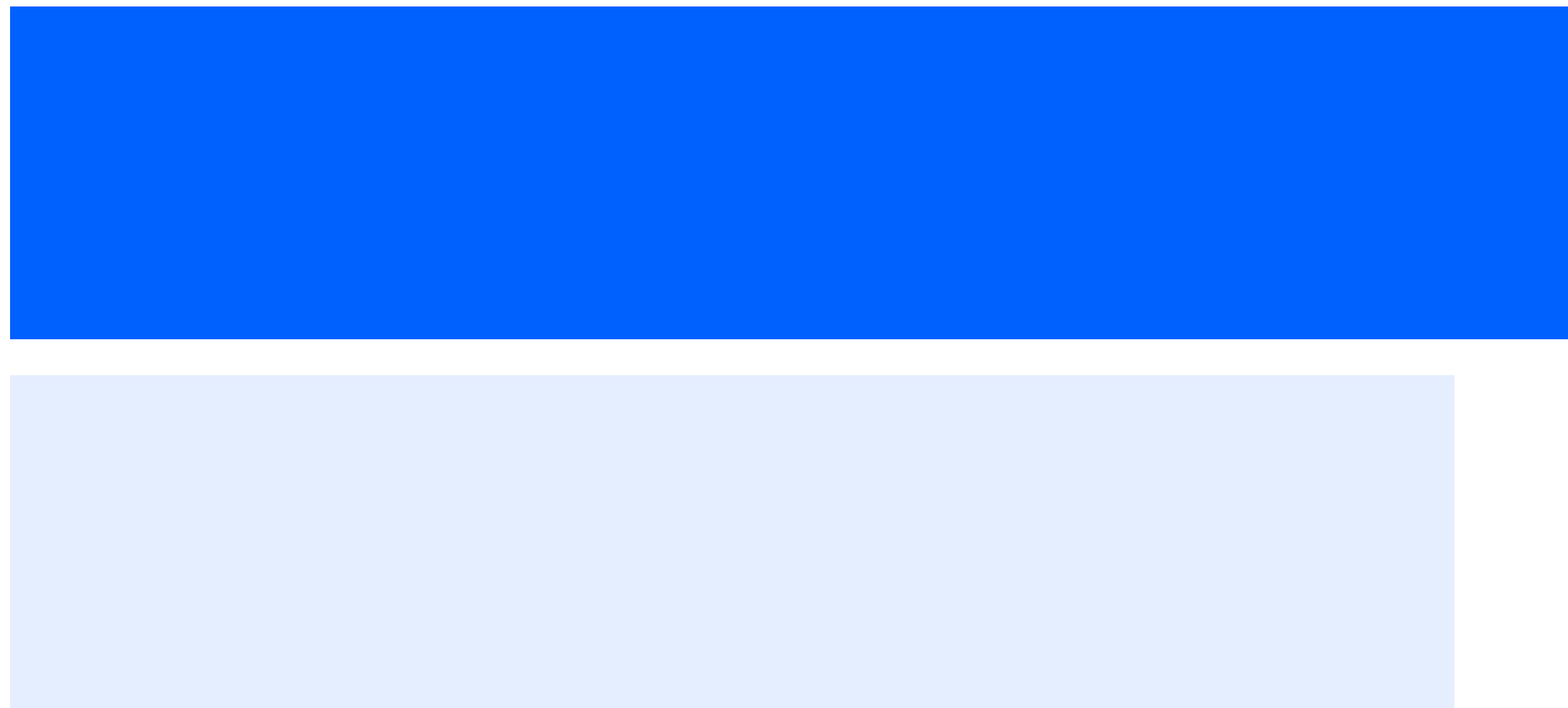
1

2

3

4

log2Enrichment



Re-clustered module 9.8.1 BP enrichment

Term

positive regulation of mitochondrion organization

extracellular matrix organization

0

1

2

3

4

log2Enrichment



Re-clustered module 9.8.1 MF enrichment

Term

copper ion binding

amino acid transmembrane transporter activity

growth factor binding

0

1

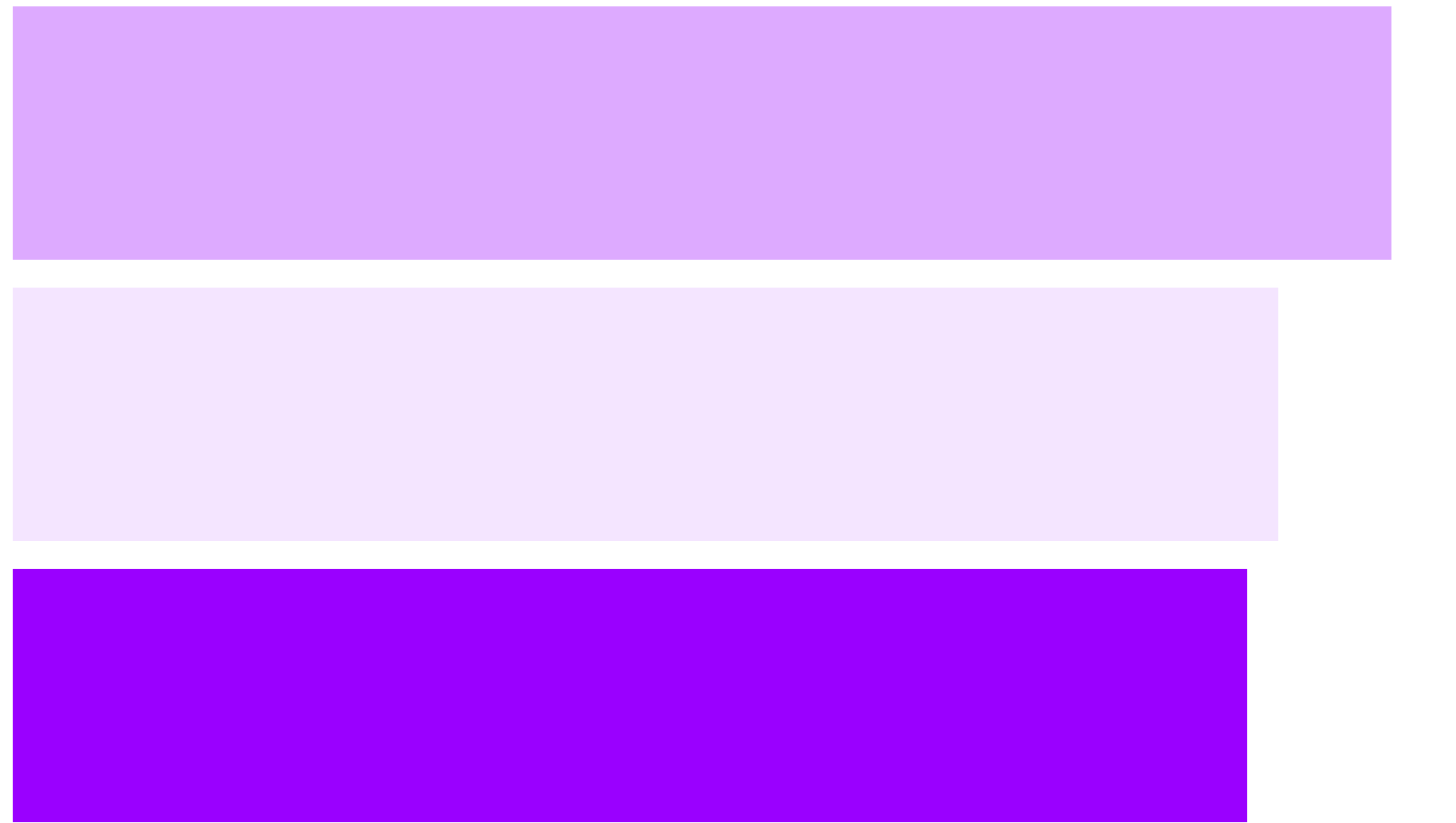
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3

4

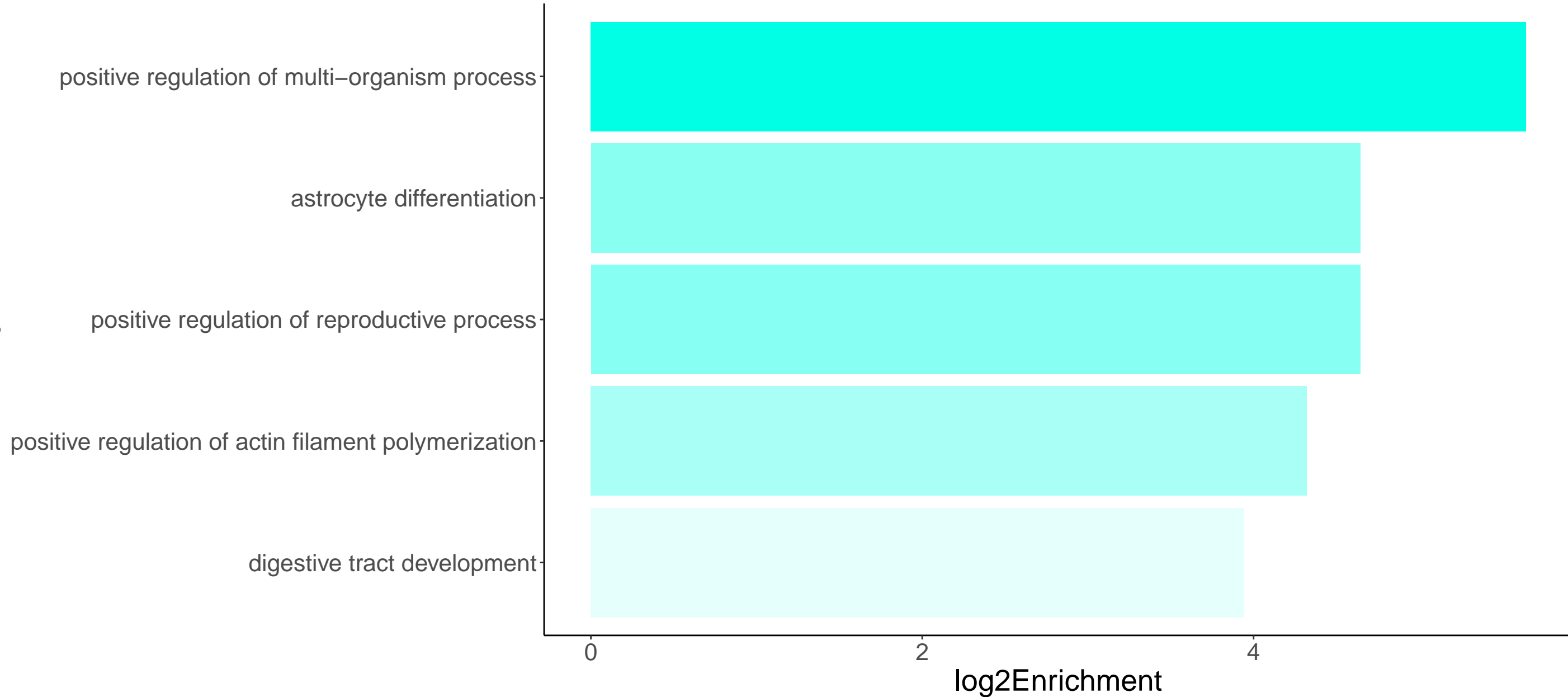
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log2Enrichment



Re-clustered module 9.8.10 BP enrichment

Term



Re-clustered module 9.8.10 MF enrichment

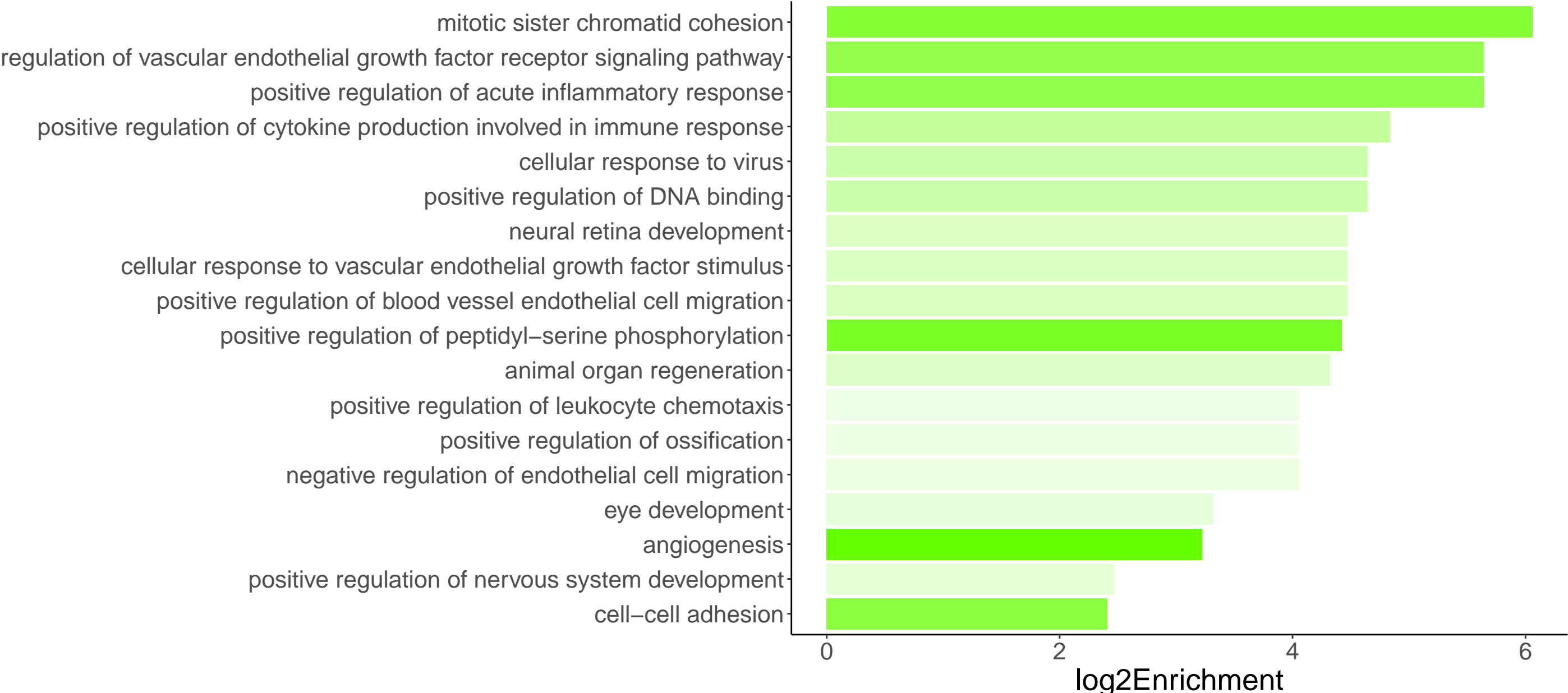
Term

log2Enrichment



Re-clustered module 9.8.11 BP enrichment

Term



Re-clustered module 9.8.11 MF enrichment

Term

growth factor activity

cytokine receptor binding

0

1

2

3

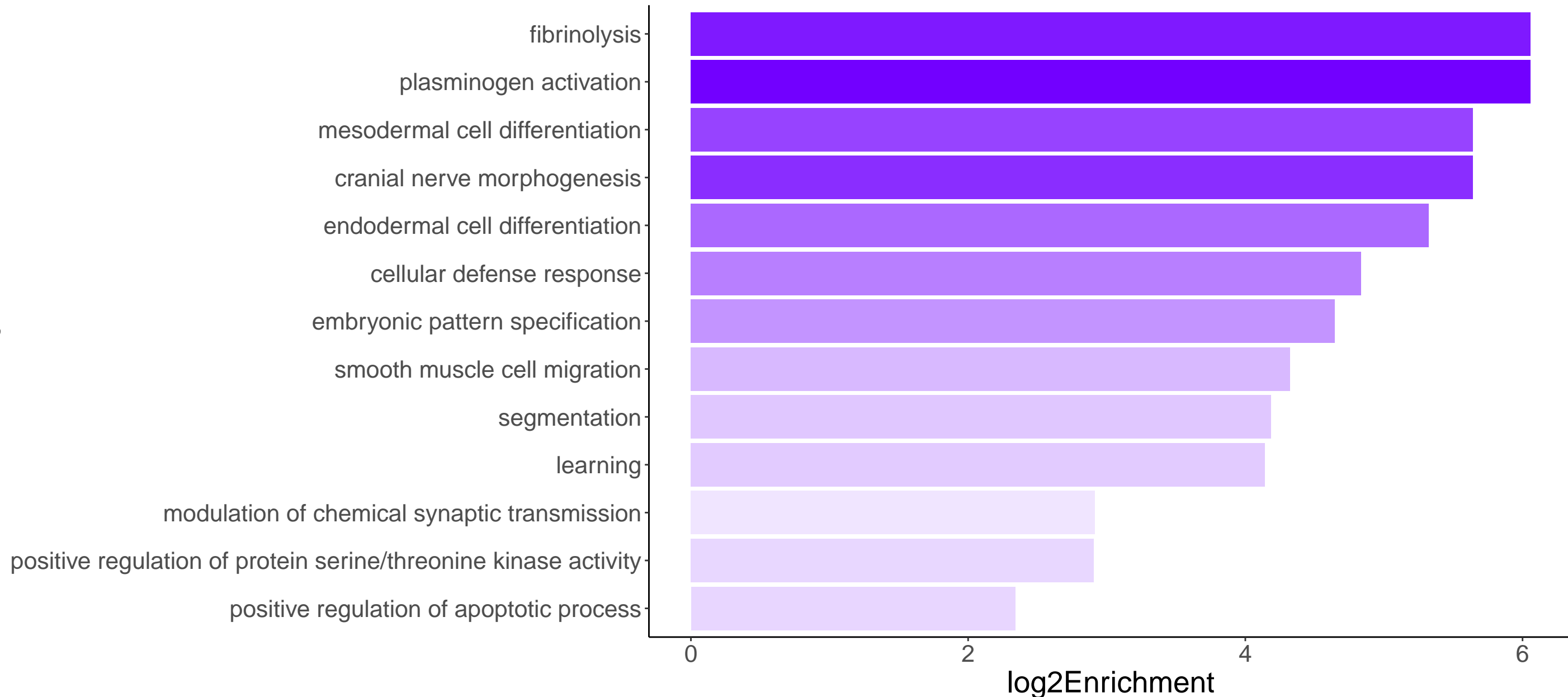
4

log2Enrichment



Re-clustered module 9.8.12 BP enrichment

Term

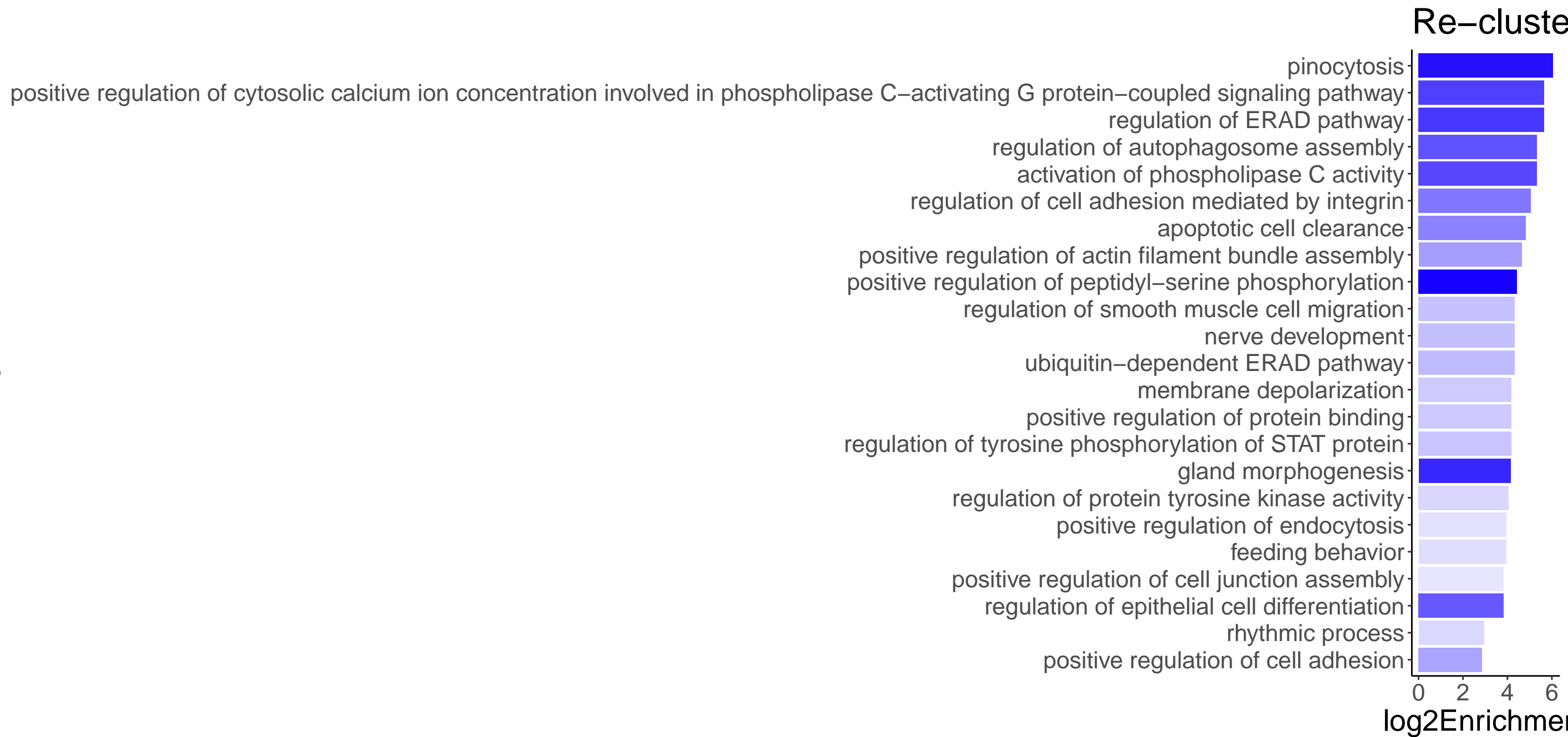


Re-clustered module 9.8.12 MF enrichment

Term

log2Enrichment





Re-clustered module 9.8.13 MF enrichment

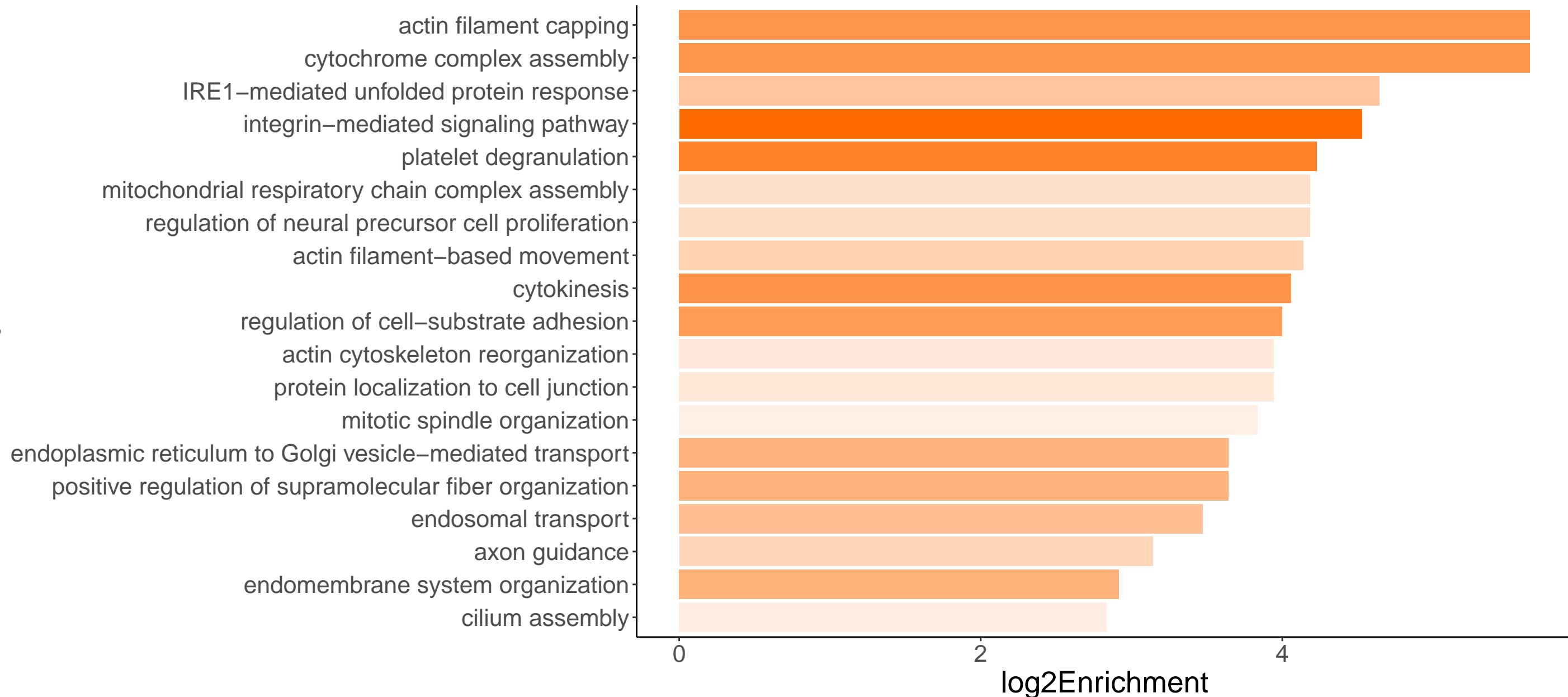
Term

log2Enrichment



Re-clustered module 9.8.2 BP enrichment

Term



Re-clustered module 9.8.2 MF enrichment

Term

structural constituent of cytoskeleton

motor activity

calmodulin binding

protein homodimerization activity

0

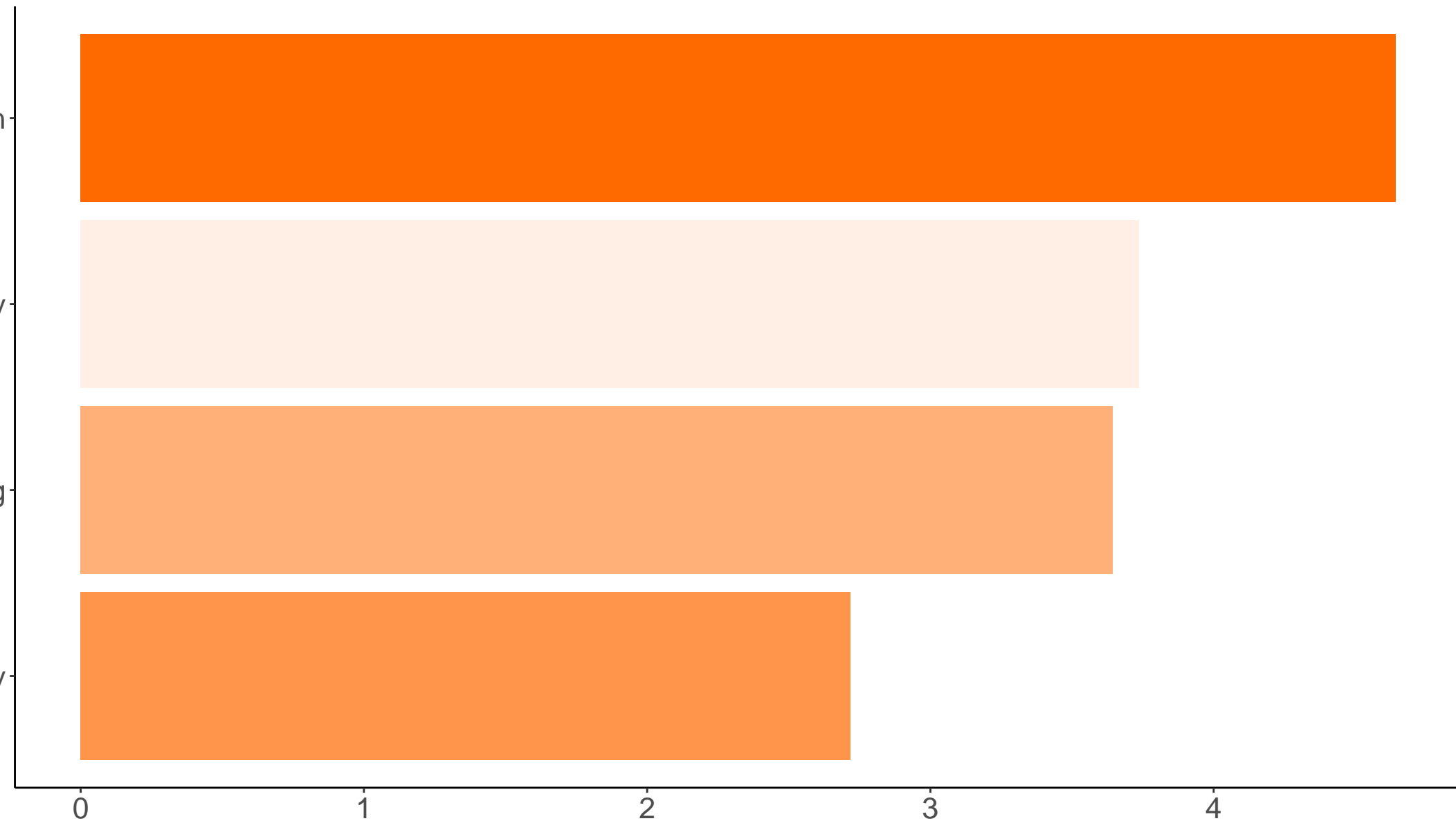
1

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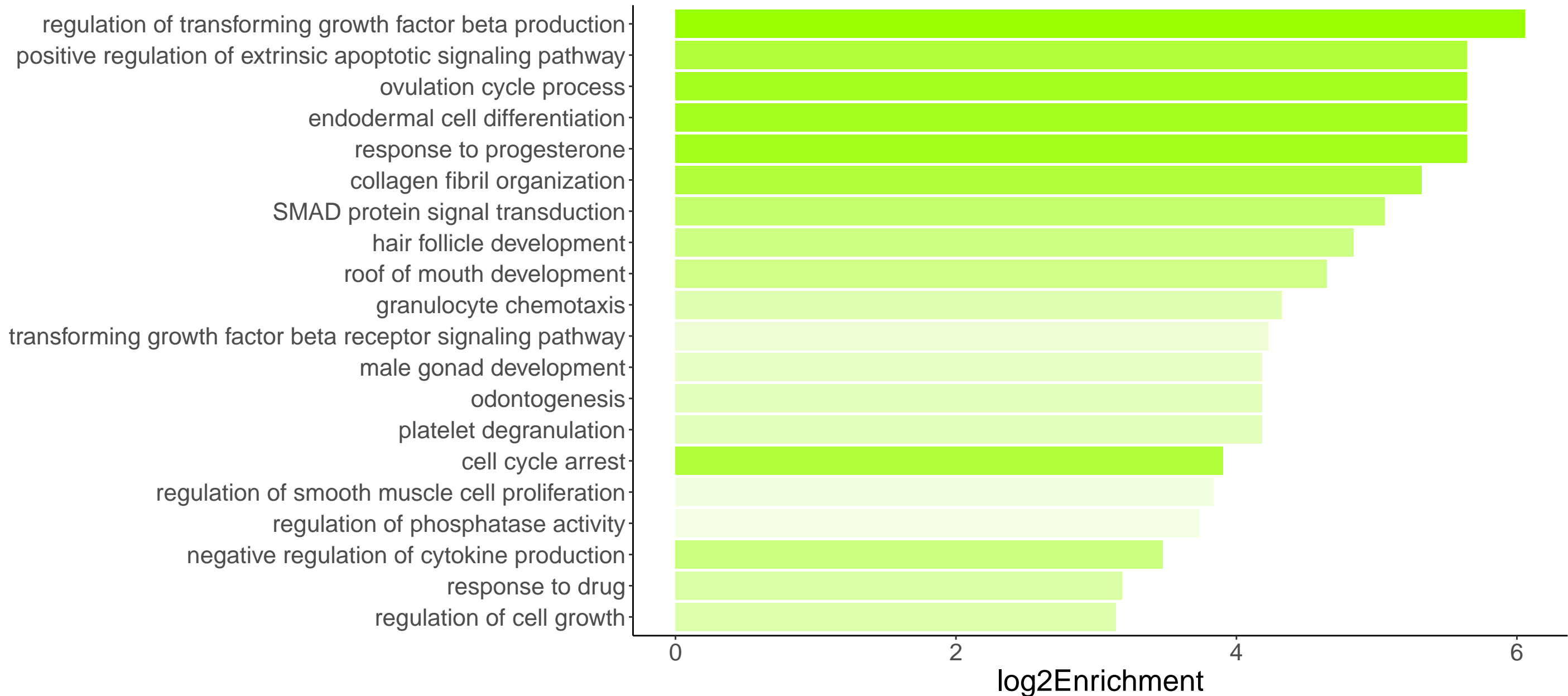
4

log2Enrichment



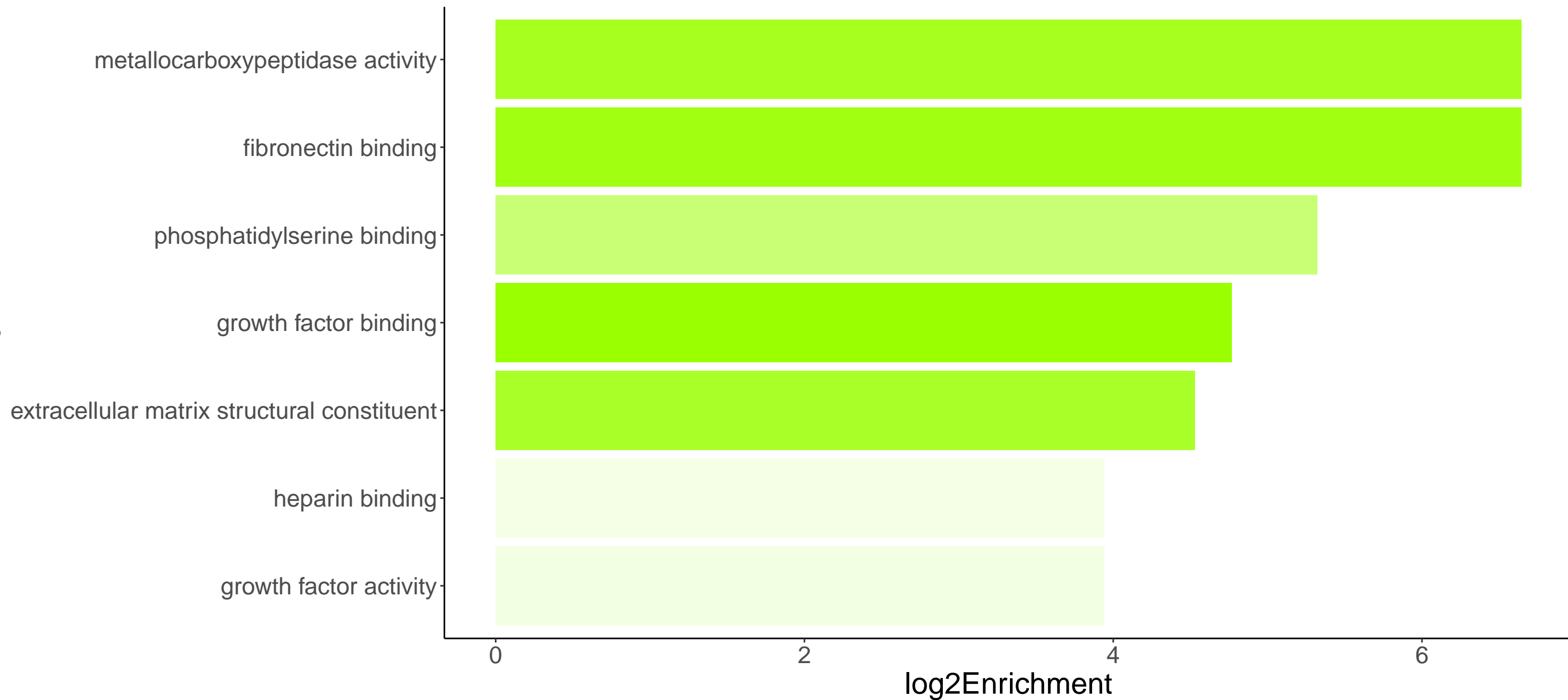
Re-clustered module 9.8.3 BP enrichment

Term



Re-clustered module 9.8.3 MF enrichment

Term



Re-clustered module 9.8.4 BP enrichment

Term

ventricular cardiac muscle tissue morphogenesis

coronary vasculature development

cardiac septum morphogenesis

primary neural tube formation

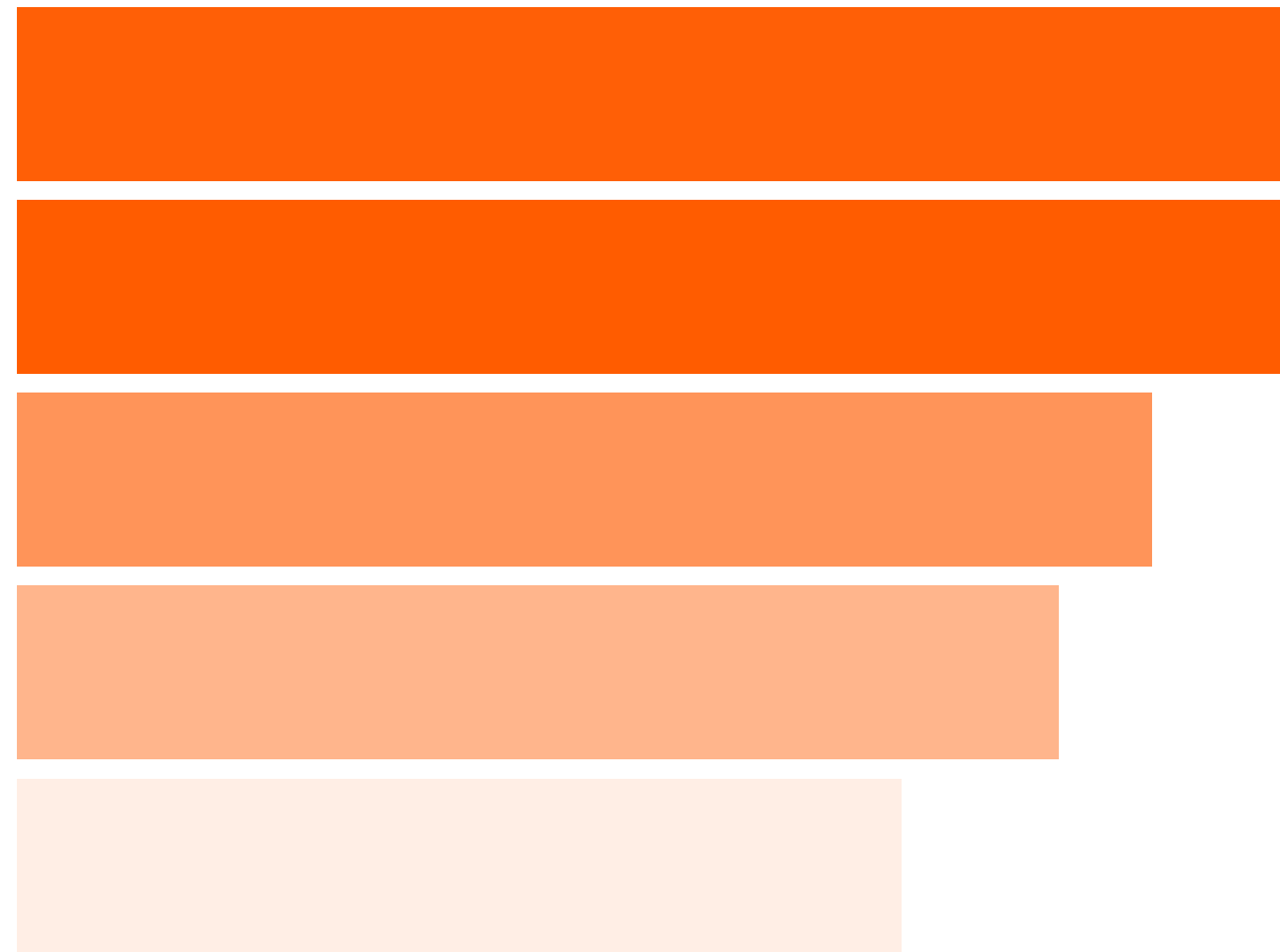
negative regulation of cellular response to growth factor stimulus

0

2

4

log2Enrichment



Re-clustered module 9.8.4 MF enrichment

Term

log2Enrichment



Re-clustered module 9.8.5 BP enrichment

Term

positive regulation of protein localization to cell periphery

cell-substrate junction assembly

regulation of cyclin-dependent protein serine/threonine kinase activity

vascular endothelial growth factor receptor signaling pathway

integrin-mediated signaling pathway

positive regulation of cell-substrate adhesion

0

1

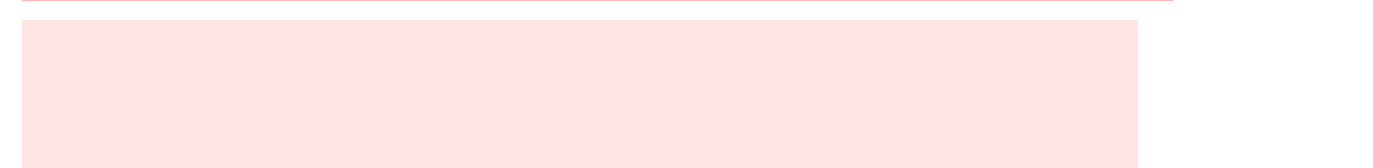
2

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log2Enrichment



Re-clustered module 9.8.5 MF enrichment

Term

laminin binding

structural constituent of cytoskeleton

cell adhesion molecule binding

0

2

4

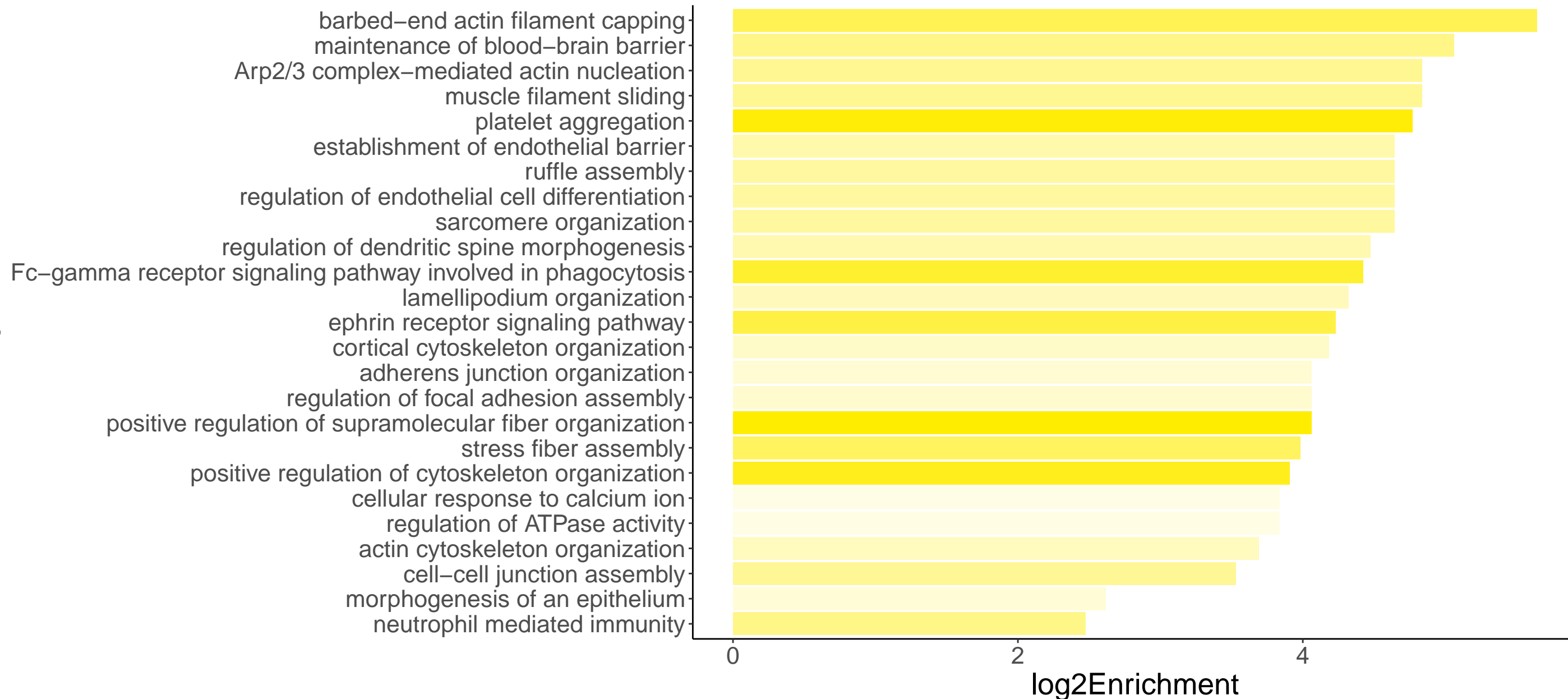
6

log2Enrichment



Re-clustered module 9.8.6 BP enrichment

Term



Re-clustered module 9.8.6 MF enrichment

Term

spectrin binding

phosphatidylinositol-4,5-bisphosphate binding

0

2

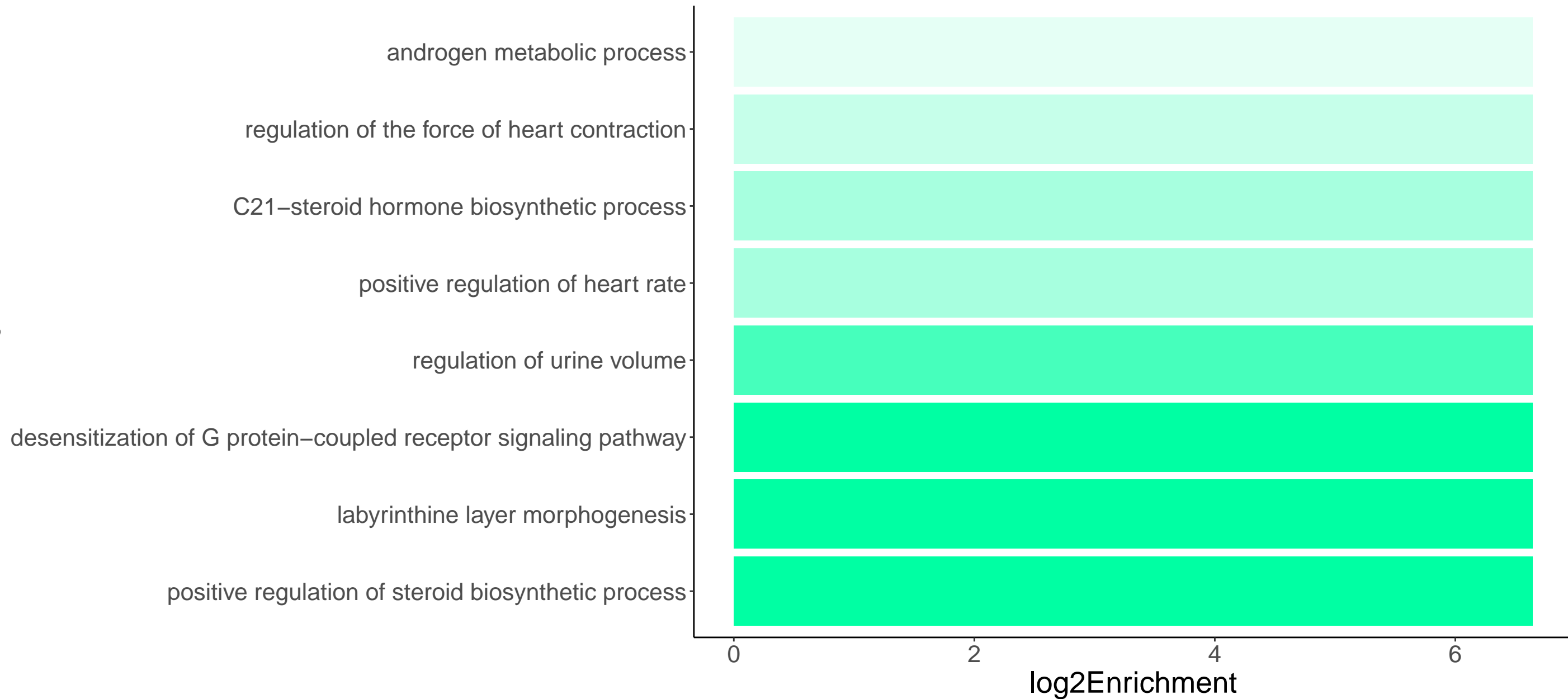
4

log2Enrichment



Re-clustered module 9.8.8 BP enrichment

Term



Re-clustered module 9.8.8 MF enrichment

Term

log2Enrichment



Re-clustered module 9.8.9 BP enrichment

Term

negative regulation of transmembrane receptor protein serine/threonine kinase signaling pathway

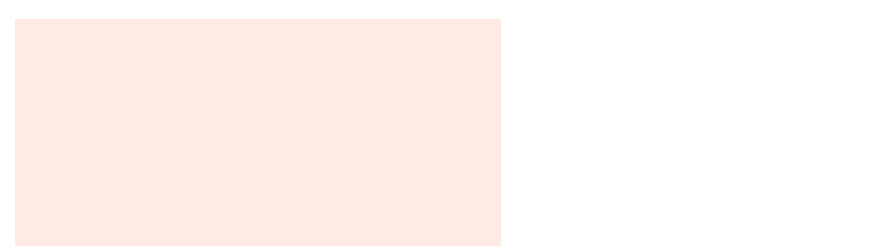
regulation of activin receptor signaling pathway

regulation of BMP signaling pathway

hematopoietic progenitor cell differentiation

0 2 4 6

log2Enrichment



Re-clustered module 9.8.9 MF enrichment

Term

proteoglycan binding

serine-type endopeptidase inhibitor activity

sulfur compound binding

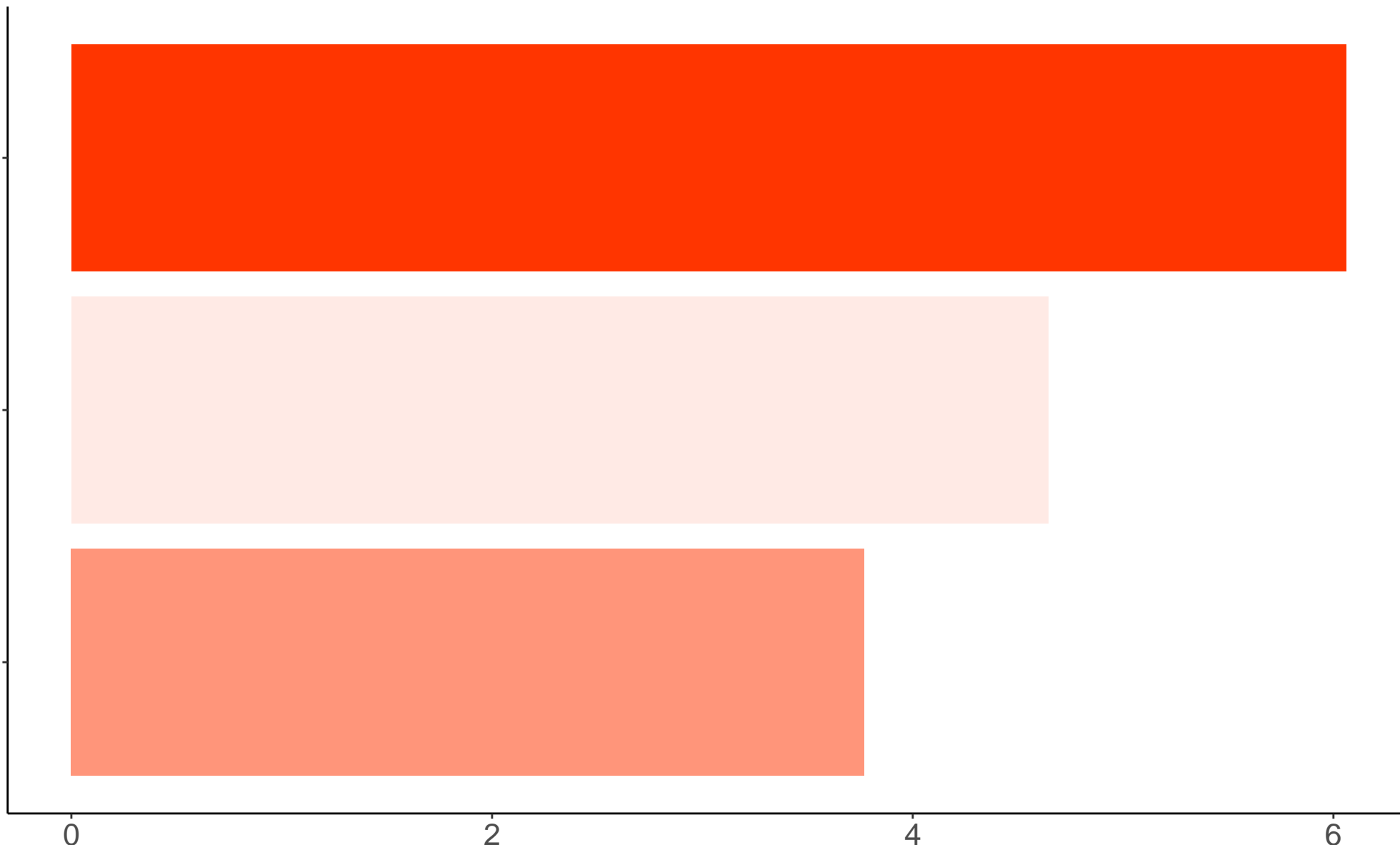
0

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log2Enrichment



Re-clustered module 9.9.1 BP enrichment

Term

lymph vessel morphogenesis

regulation of homotypic cell-cell adhesion

0

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log2Enrichment



Re-clustered module 9.9.1 MF enrichment

Term

calcium ion binding

0

1

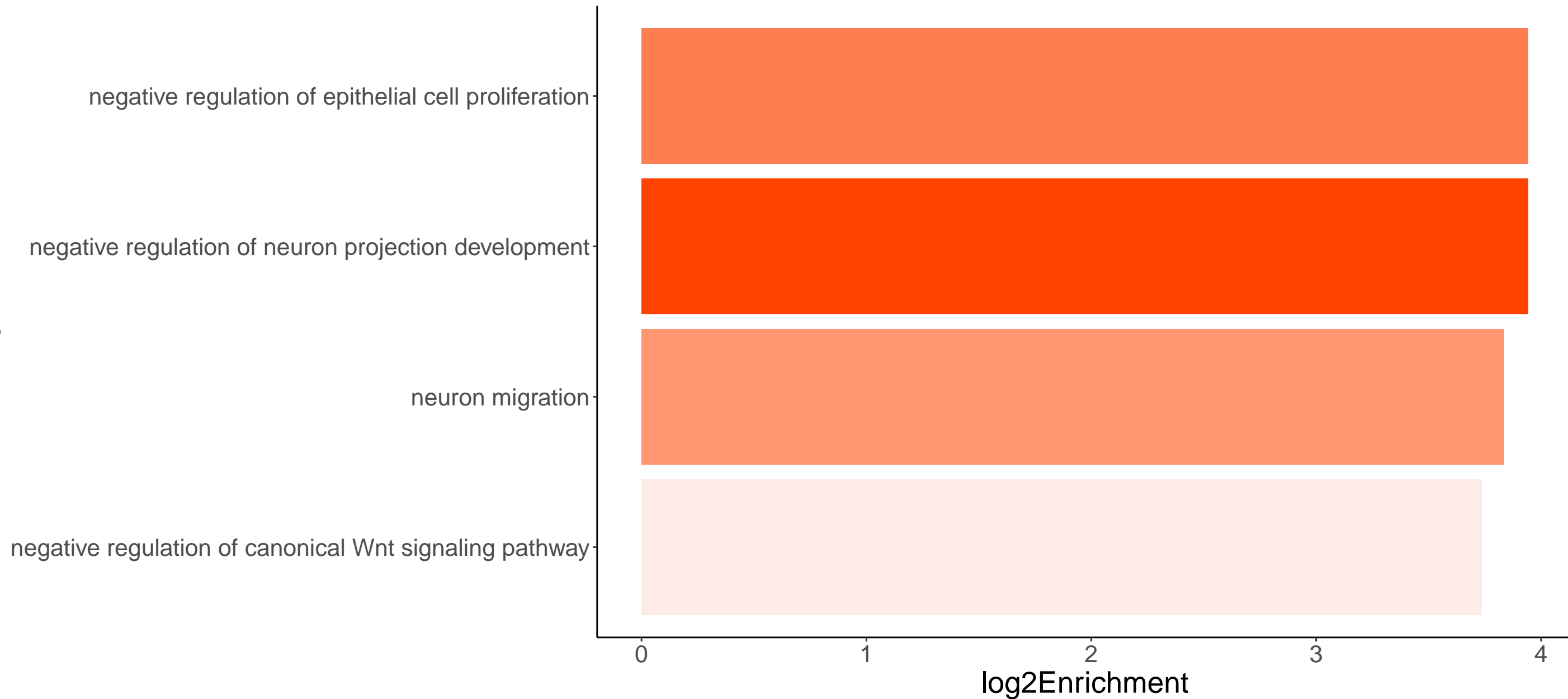
2

log2Enrichment



Re-clustered module 9.9.10 BP enrichment

Term



Re-clustered module 9.9.10 MF enrichment

Term

log2Enrichment



Re-clustered module 9.9.11 BP enrichment

Term

positive regulation of cell migration involved in sprouting angiogenesis

negative chemotaxis

ventricular septum morphogenesis

neuron projection guidance

heart development

extracellular matrix organization

0

2

4

log2Enrichment



Re-clustered module 9.9.11 MF enrichment

Term

transcription corepressor activity

0

1

2

3

log2Enrichment



Re-clustered module 9.9.12 BP enrichment

Term

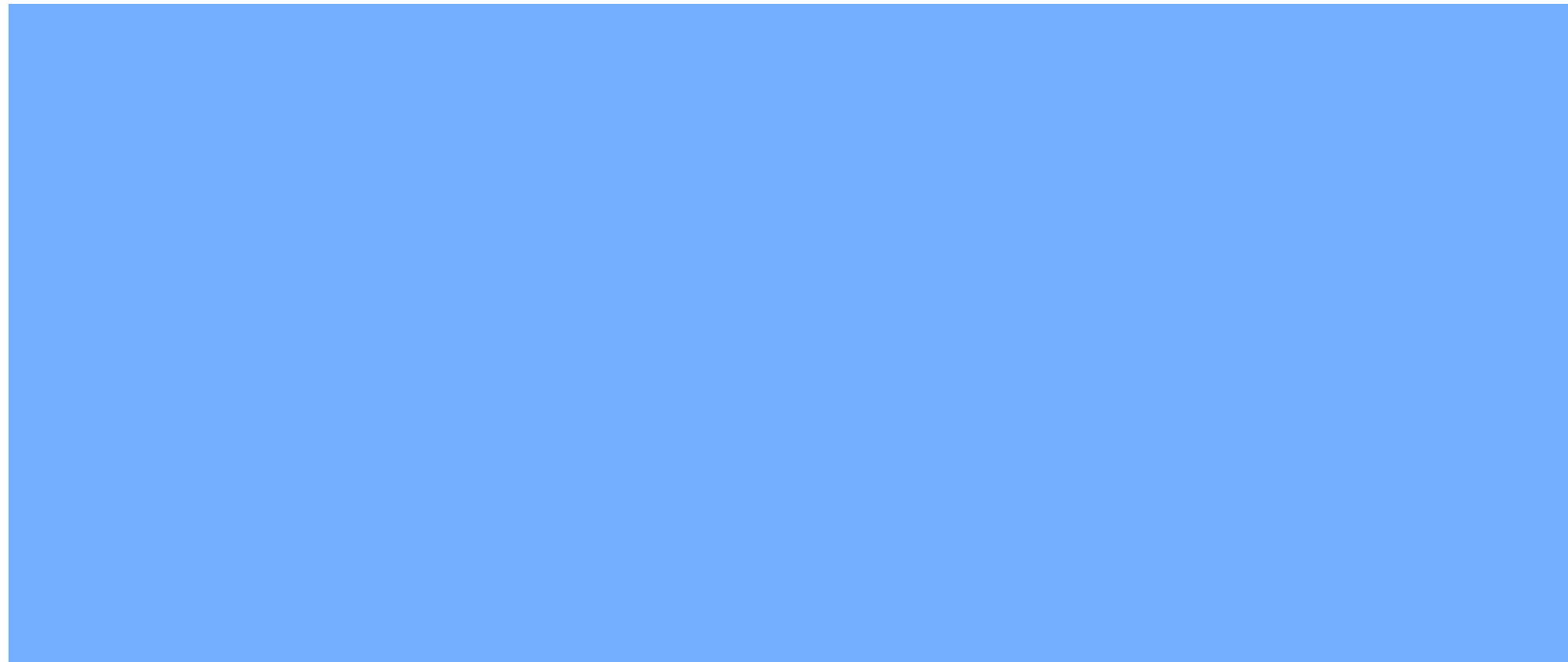
peptidyl-cysteine modification

0

2

4

log2Enrichment



Re-clustered module 9.9.12 MF enrichment

Term

GTP-dependent protein binding

0

2

4

6

log2Enrichment



Re-clustered module 9.9.2 BP enrichment

Term



Re-clustered module 9.9.2 MF enrichment

Term

actin filament binding

RNA polymerase II transcription regulatory region sequence-specific DNA binding

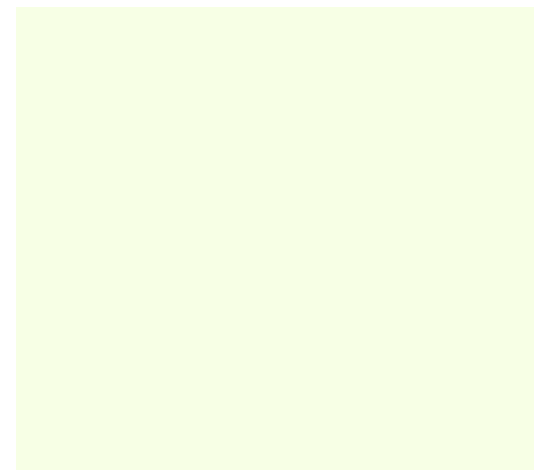
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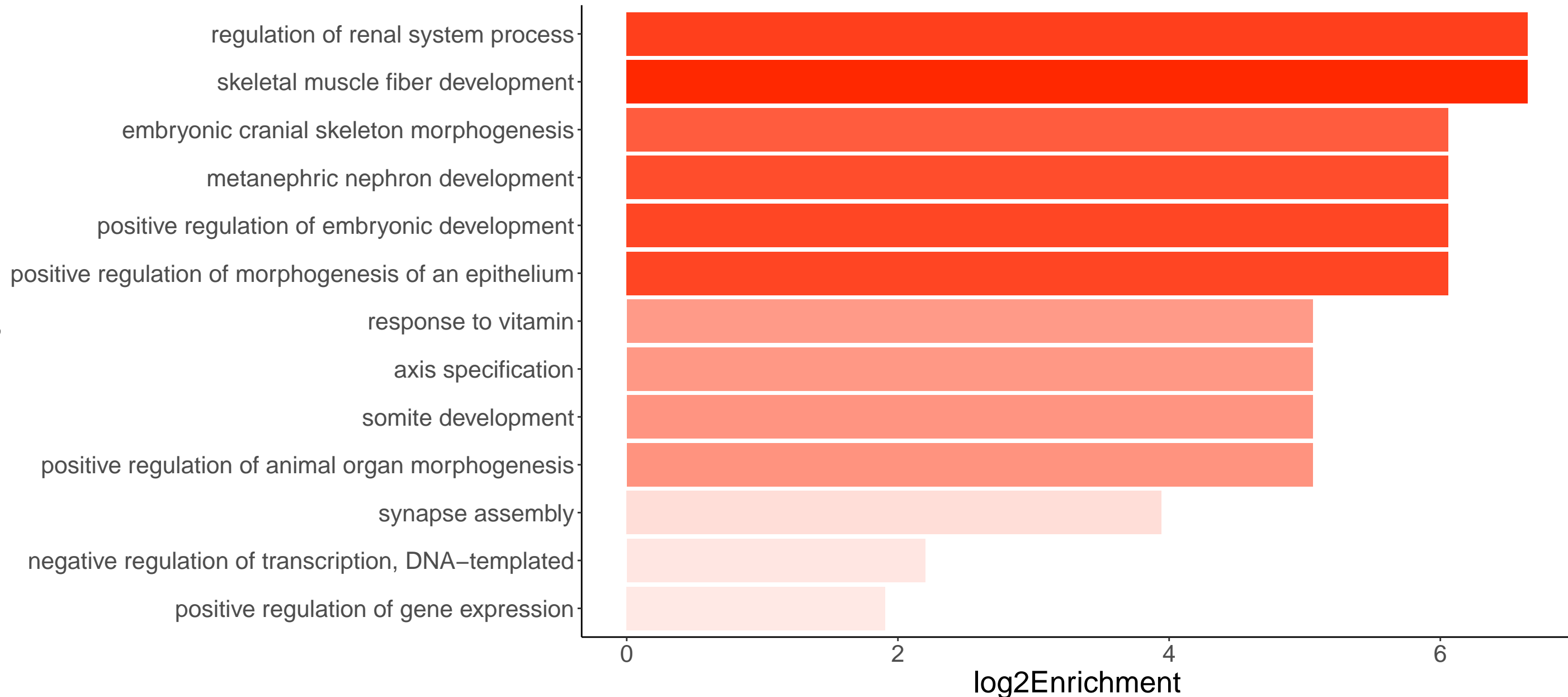
3

log2Enrichment



Re-clustered module 9.9.3 BP enrichment

Term



Re-clustered module 9.9.3 MF enrichment

Term

cis-regulatory region sequence-specific DNA binding

0.0

0.5

1.0

1.5

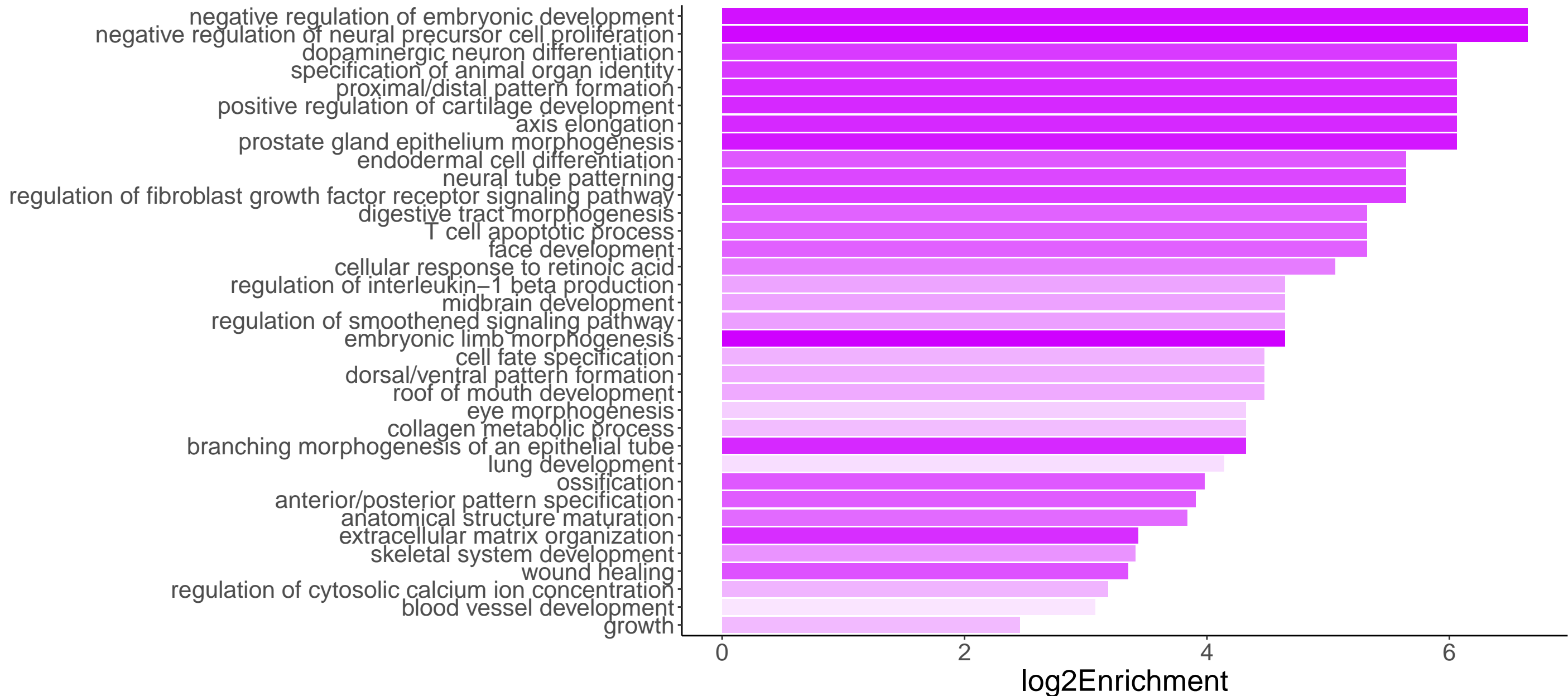
2.0

log2Enrichment



Re-clustered module 9.9.4 BP enrichment

Term



Re-clustered module 9.9.4 MF enrichment

Term

proteoglycan binding

metalloendopeptidase activity

integrin binding

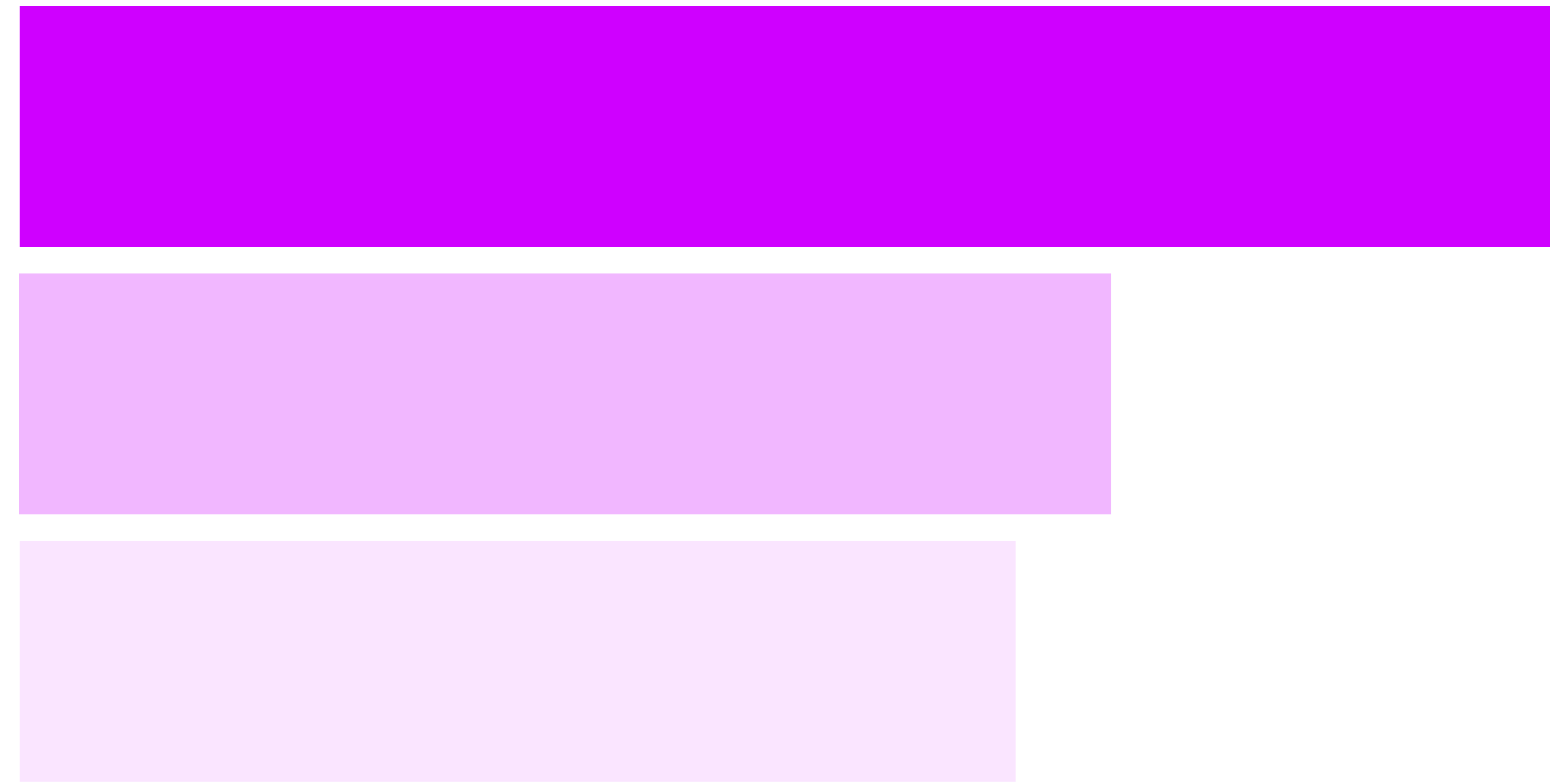
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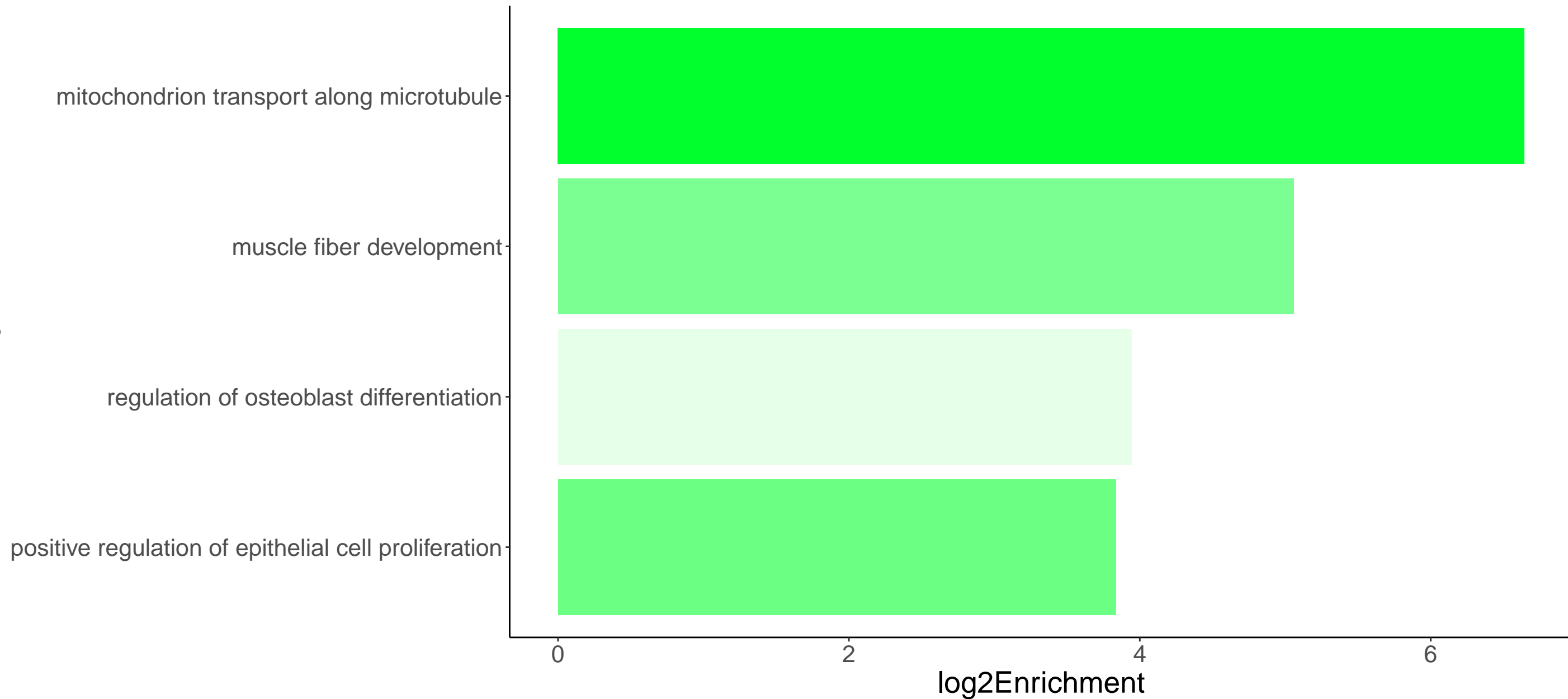
6

log2Enrichment



Re-clustered module 9.9.5 BP enrichment

Term



Re-clustered module 9.9.5 MF enrichment

Term

log2Enrichment



Re-clustered module 9.9.6 BP enrichment

Term

adult walking behavior

vascular endothelial growth factor signaling pathway

0

2

4

6

log2Enrichment



Re-clustered module 9.9.6 MF enrichment

Term

log2Enrichment



Re-clustered module 9.9.7 BP enrichment

Term

glycosaminoglycan catabolic process

activation of cysteine-type endopeptidase activity involved in apoptotic process

retinoid metabolic process

0 1 2 3 4

log2Enrichment



Re-clustered module 9.9.7 MF enrichment

Term

log2Enrichment



Re-clustered module 9.9.8 BP enrichment

Term

log2Enrichment



Re-clustered module 9.9.8 MF enrichment

Term

Ras guanyl-nucleotide exchange factor activity

0

1

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4

log2Enrichment



Re-clustered module 9.9.9 BP enrichment

Term

chondrocyte development

positive regulation of peptidyl-tyrosine phosphorylation

extracellular matrix organization

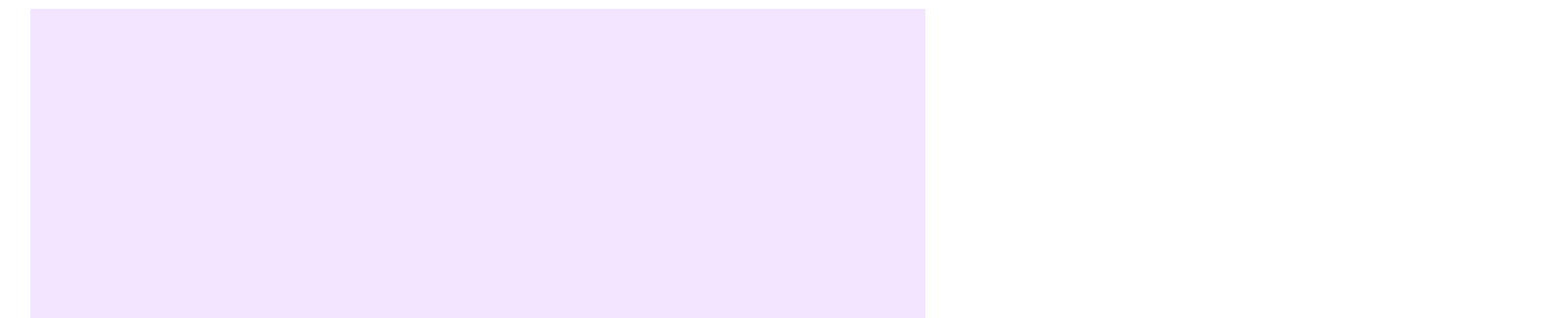
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log2Enrichment



Re-clustered module 9.9.9 MF enrichment

Term

log2Enrichment

