

Supplementary Table s7. Annotations produced by FIC/GSLA for the transcriptionally changed genes.

Job Number: GSLA07294387667044

Cutoff used:

Q1: density ≥ 0.01

Q2: $p \leq 0$

Meaning:

Q1: inter-geneset interaction density is greater than expected.

Q2: the observed interaction density can only be observed in the biologically correct interactome topology.

Categories selected: GC Panther pathway Reactome pathway

Species: Caenorhabditis elegans

Interaction dataset selected: FIC

#Subjob Number: GSLA07294387667044_0

#Description: #diet-TOP50

#Quaried GeneSet: clec-55, clec-52, nhr-202, asp-10, F54D5.12, nhr-49, str-7, dhs-20, F15E6.4, pdhb-1, cth-1, C54C8.12, prx-11, acdh-1, acdh-2, C05C10.3, C09B8.4, F22B8.7, F22E5.1, folt-2, H39E23.3, hrg-1, ilys-2, kat-1, sams-1, T07D3.9, Y37D8A.4, dhs-25, F20G2.1, farl-11, acox-2, C05C8.7, cir-1, cnc-7, cyp-33C7, dcar-1, F35E12.5, F44G3.2, tag-38, C32H11.4, ddp-1, col-81, Y38F1A.6, M03A1.8, dao-2, mdt-18, F09F7.4, F55F8.2, acdh-2, C24B9.3

Term type	Term	Description	Term size	P value	Density	Interaction number	Overlap gene number	Overlap gene(s)	Interactions
Reactome pathway	R-CEL-389887	Beta-oxidation of pristanoyl-CoA	11	0	0.01446	7	0		nhr-49-WBGene00019060 nhr-49-WBGene00008167 nhr-49-WBGene00010336 kat-1-WBGene00008167 kat-1-WBGene00008565 kat-1-WBGene00008564 T07D3.9-WBGene00016511
Panther pathway	P02737	Cysteine biosynthesis	5	0	0.02272	5	0		cth-1-WBGene00013866 cth-1-WBGene00019962 cth-1-WBGene00019096 cth-1-WBGene00010759 cth-1-WBGene00007653
GO biological process	GO:0050832	defense response to fungus	24	0	0.02556	27	1	dcar-1	nhr-49-WBGene00006575 nhr-49-WBGene00010700 nhr-49-WBGene00006599 nhr-49-WBGene00004055 nhr-49-WBGene00001674 dcar-1-WBGene00010556 dcar-1-WBGene00000253 dcar-1-WBGene00006575 dcar-1-WBGene00000555 dcar-1-WBGene00005556 dcar-1-WBGene00003771 dcar-1-WBGene00015303 dcar-1-WBGene00000558 dcar-1-WBGene00010700 dcar-1-WBGene00044900 dcar-1-WBGene00006599 dcar-1-WBGene00004860 dcar-1-WBGene00009000 dcar-1-WBGene00003096 dcar-1-WBGene00004857 dcar-1-WBGene00004055 dcar-1-WBGene00000018 dcar-1-WBGene00004034 dcar-1-WBGene00000936 dcar-1-WBGene00003769 dcar-1-WBGene00000560 dcar-1-WBGene00001674
GO biological process	GO:0019217	regulation of fatty acid metabolic process	11	0	0.02685	13	1	nhr-49	nhr-202-WBGene00003670 nhr-202-nhr-49 nhr-49-WBGene00006518 nhr-49-WBGene00015497 nhr-49-WBGene00016610 nhr-49-WBGene00014054 nhr-49-WBGene00021313 nhr-49-WBGene00003670 nhr-49-WBGene00002210 nhr-49-nhr-49 nhr-49-WBGene00007016 dcar-1-WBGene00016610 dcar-1-WBGene00021313

Reactome pathway	R-CEL-77286	mitochondrial fatty acid beta-oxidation of saturated fatty acids	7	0	0.01948	6	0	nhr-49-WBGene00020366 nhr-49-WBGene00020347 kat-1-WBGene00001155 kat-1-WBGene00015125 kat-1-WBGene00020366 kat-1-WBGene00020347
GO biological process	GO:0009620	response to fungus	25	0	0.02454	27	1	dcar-1 nhr-49-WBGene00006575 nhr-49-WBGene00001674 nhr-49-WBGene00010700 nhr-49-WBGene00004055 dcar-1-WBGene00000253 dcar-1-WBGene00006575 dcar-1-WBGene00000555 dcar-1-WBGene00000556 dcar-1-WBGene00000558 dcar-1-WBGene00006599 dcar-1-WBGene00004860 dcar-1-WBGene00000900 dcar-1-WBGene00004857 dcar-1-WBGene00000018 dcar-1-WBGene00000560 dcar-1-WBGene00001674 dcar-1-WBGene00010556 dcar-1-WBGene00003771 dcar-1-WBGene00015303 dcar-1-WBGene00010700 dcar-1-WBGene00044900 dcar-1-WBGene00003096 dcar-1-WBGene00004055 dcar-1-WBGene00004034 dcar-1-WBGene00000936 dcar-1-WBGene00003769
GO biological process	GO:0045923	positive regulation of fatty acid metabolic process	8	0	0.02556	9	0	nhr-202-WBGene00003670 nhr-49-WBGene00006518 nhr-49-WBGene00015497 nhr-49-WBGene00016610 nhr-49-WBGene00014054 nhr-49-WBGene00021313 nhr-49-WBGene00003670 dcar-1-WBGene00016610 dcar-1-WBGene00021313
GO biological process	GO:0044272	sulfur compound biosynthetic process	11	0	0.01859	9	0	cth-1-WBGene00013866 cth-1-WBGene00019962 cth-1-WBGene00010759 cth-1-WBGene00007653 C05C8.7-WBGene00005024 farl-11-WBGene00005021 farl-11-WBGene00005024 farl-11-WBGene00005025 farl-11-WBGene00005026
GO biological process	GO:0006024	glycosaminoglycan biosynthetic process	7	0	0.02272	7	0	C05C8.7-WBGene00005024 farl-11-WBGene00005020 farl-11-WBGene00005021 farl-11-WBGene00005022 farl-11-WBGene00005024 farl-11-WBGene00005025 farl-11-WBGene00005026
Reactome pathway	R-CEL-4090294	SUMOylation of intracellular receptors	17	0	0.02272	17	0	nhr-202-WBGene00003607 nhr-202-WBGene00003602 nhr-49-WBGene00004786 nhr-49-WBGene00000908 nhr-49-WBGene00003675 nhr-49-WBGene00003623 nhr-49-WBGene00022374 nhr-49-WBGene00003602 acd-1-WBGene00003622 dcar-1-WBGene00004786 dcar-1-WBGene00003675 dcar-1-WBGene00006790 dcar-1-WBGene00016126 dcar-1-WBGene00003629 dcar-1-WBGene00003623 dcar-1-WBGene00022374 dcar-1-WBGene00003602

GO biological process	GO:0006631	fatty acid metabolic process	17	0	0.0147	11	0	sams-1-WBGene00000991 sams-1-WBGene00013284 nhr-49-WBGene00009221 nhr-49-WBGene00001397 nhr-49-WBGene00001398 nhr-49-WBGene00001399 nhr-49-WBGene00016610 nhr-49-WBGene00001395 cyp-33C7-WBGene00018334 kat-1-WBGene00001153 dcar-1-WBGene00016610
GO biological process	GO:0005765	lysosomal membrane	10	0	0.0159	7	1	hrg-1-WBGene00001371 hrg-1-WBGene00007979 hrg-1-WBGene00001819 hrg-1-WBGene00003053 hrg-1-WBGene00001814 hrg-1-WBGene00021546 hrg-1-WBGene00008052 nhr-202-WBGene00016975 nhr-202-WBGene00007547 nhr-202-WBGene00019816 nhr-202-WBGene00015705 nhr-202-WBGene00003630 nhr-202-WBGene00003637 nhr-202-nhr-49 nhr-202-WBGene00008221 nhr-202-WBGene00011097 nhr-202-WBGene00011100 nhr-202-WBGene00003691 nhr-202-WBGene00003605 nhr-202-WBGene00003690 nhr-202-WBGene00003607 nhr-202-WBGene00003609 nhr-202-WBGene00003600 nhr-202-WBGene00003602 nhr-202-WBGene00003706 nhr-202-WBGene00003704 nhr-202-WBGene00003659 nhr-202-WBGene00003658 nhr-202-WBGene00003710 nhr-202-WBGene00003654 nhr-202-WBGene00003616 nhr-202-WBGene00003613 nhr-202-WBGene00003719 nhr-202-WBGene00022423 nhr-202-WBGene00003627 nhr-202-WBGene00003628 nhr-202-WBGene00003726 nhr-202-WBGene00003727 nhr-49-WBGene00015497 nhr-49-WBGene00003675 nhr-49-WBGene00007547 nhr-49-WBGene00003630 nhr-49-WBGene00003637 nhr-49-nhr-49 nhr-49-WBGene00003650 nhr-49-WBGene00003690 nhr-49-WBGene00003609 nhr-49-WBGene00022374 nhr-49-WBGene00003600 nhr-49-WBGene00003602 nhr-49-WBGene00000908 nhr-49-WBGene00003708 nhr-49-WBGene00003654 nhr-49-WBGene00003616 nhr-49-
Reactome pathway	R-CEL-383280	Nuclear Receptor transcription pathway	57	0	0.02392	60	1	nhr-49

GO biological process	GO:0002009	morphogenesis of an epithelium	50	0	0.01772	39	1	farl-11	C05C8.7-WBGene00005024 farl-11-WBGene00000395 farl-11-WBGene00000390 farl-11-WBGene00000961 farl-11-WBGene00001330 farl-11-WBGene00001165 farl-11-WBGene00006876 farl-11-WBGene00003258 farl-11-WBGene00014153 farl-11-WBGene00005020 farl-11-WBGene00005021 farl-11-WBGene00005022 farl-11-WBGene00000168 farl-11-WBGene00005023 farl-11-WBGene00005024 farl-11-WBGene00005025 farl-11-WBGene00005026 farl-11-WBGene00006868 farl-11-WBGene00006869 farl-11-WBGene00001687 farl-11-WBGene00016354 farl-11-WBGene00006437 farl-11-WBGene00019030 farl-11-WBGene00010631 farl-11-WBGene00000199 farl-11-WBGene00002181 farl-11-WBGene00000200 farl-11-WBGene00006957 farl-11-WBGene00000204 farl-11-WBGene00000205 farl-11-WBGene00000203 farl-11-WBGene00013355 farl-11-WBGene00006961 farl-11-WBGene00021170 farl-11-WBGene00003241 farl-11-WBGene00004749 farl-11-WBGene00007561 farl-11-WBGene00001333 farl-11-WBGene00001526
GO biological process	GO:1901244	positive regulation of transcription from RNA polymerase II promoter involved in defense response to fungus	9	0	0.04292	17	0		nhr-49-WBGene00004055 nhr-49-WBGene00004758 nhr-49-WBGene00010700 nhr-49-WBGene00010251 nhr-49-WBGene00077712 nhr-49-WBGene00006599 nhr-49-WBGene00003822 nhr-49-WBGene00001674 dcar-1-WBGene00004055 dcar-1-WBGene00004758 dcar-1-WBGene00010700 dcar-1-WBGene00010251 dcar-1-WBGene00001251 dcar-1-WBGene00077712 dcar-1-WBGene00006599 dcar-1-WBGene00003822 dcar-1-WBGene00001674
GO biological process	GO:0036003	positive regulation of transcription from RNA polymerase II promoter in response to stress	12	0	0.02272	12	1	nhr-49	nhr-202-nhr-49 nhr-49-WBGene00004804 nhr-49-WBGene00022703 nhr-49-WBGene00010251 nhr-49-nhr-49 nhr-49-WBGene00002147 nhr-49-WBGene00077712 nhr-49-WBGene00008852 farl-11-WBGene00013355 dcar-1-WBGene00010251 dcar-1-WBGene00001251 dcar-1-WBGene00077712
GO biological process	GO:0060625	regulation of protein deneddylation	7	0	0.01948	6	1	F22B8.7	F22B8.7-WBGene00012039 F22B8.7-WBGene00011195 F22B8.7-WBGene00018330 F22B8.7-WBGene00008296 F22B8.7-WBGene00013606 F22B8.7-WBGene00011304

GO biological process	GO:0048729	tissue morphogenesis	51	0	0.01737	39	1	farl-11	C05C8.7-WBGene00005024 farl-11-WBGene00000395 farl-11-WBGene00000390 farl-11-WBGene00000961 farl-11-WBGene00001330 farl-11-WBGene00001165 farl-11-WBGene00006876 farl-11-WBGene00003258 farl-11-WBGene00014153 farl-11-WBGene00005020 farl-11-WBGene00005021 farl-11-WBGene00005022 farl-11-WBGene00000168 farl-11-WBGene00005023 farl-11-WBGene00005024 farl-11-WBGene00005025 farl-11-WBGene00005026 farl-11-WBGene00006868 farl-11-WBGene00006869 farl-11-WBGene00001687 farl-11-WBGene00016354 farl-11-WBGene00006437 farl-11-WBGene00019030 farl-11-WBGene00010631 farl-11-WBGene00000199 farl-11-WBGene00002181 farl-11-WBGene00000200 farl-11-WBGene00006957 farl-11-WBGene00000204 farl-11-WBGene00000205 farl-11-WBGene00000203 farl-11-WBGene00013355 farl-11-WBGene00006961 farl-11-WBGene00021170 farl-11-WBGene00003241 farl-11-WBGene00004749 farl-11-WBGene00007561 farl-11-WBGene00001333 farl-11-WBGene00001526
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