

| Symbol | Title | 20mg TO | 5mg TO | Fish Oil | Control | ANOVA |
|---|--|---------|---------|----------|---------|----------|
| Upregulated by 20 mg/kg TO901317 | | | | | | |
| AB112350 | cDNA sequence AB112350 | 425.48 | 376.89 | 345.43 | 349.16 | 0.003707 |
| Abca1 | ATP-binding cassette, sub-family A (ABC1), member 1 | 4361.42 | 2659.88 | 1808.92 | 1627.30 | 5.72E-09 |
| Abca1 | ATP-binding cassette, sub-family A (ABC1), member 1 | 971.38 | 481.95 | 317.09 | 270.67 | 8.28E-07 |
| Abca1 | ATP-binding cassette, sub-family A (ABC1), member 1 | 436.05 | 231.03 | 159.11 | 154.36 | 6.61E-06 |
| Abcg1 | ATP-binding cassette, sub-family G (WHITE), member 1 | 528.23 | 392.17 | 329.37 | 366.91 | 3.68E-06 |
| Abcg1 | ATP-binding cassette, sub-family G (WHITE), member 1 | 1342.78 | 1169.90 | 1074.46 | 1024.41 | 0.001339 |
| Abhd6 | abhydrolase domain containing 6 | 1933.53 | 1781.24 | 1798.00 | 1689.30 | 0.012262 |
| Acsl3 | acyl-CoA synthetase long-chain family member 3 | 877.31 | 791.73 | 767.94 | 699.32 | 0.002524 |
| Actn1 | actinin, alpha 1 | 2023.85 | 1955.55 | 1889.71 | 1853.37 | 0.02923 |
| Adam17 | a disintegrin and metallopeptidase domain 17 | 279.17 | 256.45 | 278.96 | 244.37 | 0.021354 |
| Ahctf1 | AT hook containing transcription factor 1 | 938.48 | 850.34 | 856.50 | 826.82 | 0.026755 |
| Ahi1 | Abelson helper integration site | 4422.31 | 4148.39 | 4284.02 | 3981.48 | 0.017585 |
| Angptl4 | angiopoietin-like 4 | 91.56 | 82.27 | 72.86 | 62.56 | 0.008064 |
| Apoc1 | apolipoprotein C-I | 337.92 | 249.44 | 158.50 | 134.29 | 0.002025 |
| Apod | apolipoprotein D | 5364.78 | 4766.05 | 3771.33 | 3516.03 | 0.008891 |
| Arhgap25 | Rho GTPase activating protein 25 | 39.99 | 30.34 | 49.78 | 18.93 | 0.003954 |
| Armc9 | armadillo repeat containing 9 | 92.69 | 83.82 | 70.41 | 69.27 | 0.021351 |
| Atp8b2 | Atpase, class I, type 8B, member 2 | 1335.20 | 1264.13 | 1218.16 | 1216.07 | 0.007983 |
| Atxn7l4 | ataxin 7-like 4 | 624.13 | 594.87 | 580.37 | 533.11 | 0.02504 |
| AW048948 | expressed sequence AW048948 | 2166.23 | 2054.52 | 2168.48 | 1921.93 | 0.027889 |
| B3gat1 | beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P) | 4493.09 | 4280.47 | 4295.39 | 4259.35 | 0.018996 |
| Banp | Btg3 associated nuclear protein | 558.40 | 516.68 | 428.86 | 406.87 | 0.025038 |
| BC024868 | cDNA sequence BC024868 | 1235.51 | 1051.96 | 1078.49 | 983.44 | 0.016436 |
| Bcl2 | B-cell leukemia/lymphoma 2 | 179.19 | 162.51 | 184.02 | 139.81 | 0.014421 |
| Bloc1s2 | biogenesis of lysosome-related organelles complex-1, subunit | 1547.63 | 1228.27 | 1366.86 | 1172.33 | 0.001789 |
| Brap | BRCA1 associated protein | 728.82 | 647.24 | 663.84 | 634.66 | 0.022906 |
| Brunol4 | bruno-like 4, RNA binding protein (Drosophila) | 5504.77 | 4809.43 | 5316.05 | 4795.69 | 0.012166 |

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|------------|---|---------|---------|---------|---------|----------|
| Btg1 | B-cell translocation gene 1, anti-proliferative | 2814.37 | 2606.66 | 2424.94 | 2449.16 | 0.01295 |
| Casc3 | cancer susceptibility candidate 3 | 1049.41 | 925.77 | 909.96 | 925.96 | 0.008002 |
| Ccar1 | cell division cycle and apoptosis regulator 1 | 1353.69 | 1303.53 | 1284.69 | 1252.32 | 0.032157 |
| Ccdc28a | coiled-coil domain containing 28A | 671.18 | 606.87 | 588.17 | 583.55 | 0.023724 |
| Ccdc73 | coiled-coil domain containing 73 | 25.73 | 13.05 | 21.87 | 6.39 | 0.03465 |
| Ccdc95 | coiled-coil domain containing 95 | 193.63 | 152.41 | 155.09 | 143.49 | 0.019704 |
| Cdkn1a | cyclin-dependent kinase inhibitor 1A (P21) | 399.09 | 330.41 | 279.07 | 217.06 | 0.035199 |
| Cenpo | centromere protein O | 14.46 | 6.93 | 18.74 | 4.56 | 0.002517 |
| Chd2 | chromodomain helicase DNA binding protein 2 | 260.86 | 239.19 | 226.53 | 185.65 | 0.008867 |
| Col8a1 | procollagen, type VIII, alpha 1 | 5.02 | 2.13 | 1.06 | 0.85 | 0.018771 |
| Cox6b1 | cytochrome c oxidase, subunit VIb polypeptide 1 | 8081.47 | 7669.06 | 7871.90 | 7352.86 | 0.023768 |
| Creb1 | cAMP responsive element binding protein 1 | 10.50 | 6.73 | 3.47 | 0.72 | 0.025975 |
| Crip2 | cysteine rich protein 2 | 1969.78 | 1823.34 | 1839.80 | 1790.91 | 0.013811 |
| D10Ert641e | DNA segment, Chr 10, ERATO Doi 641, expressed | 2034.21 | 1934.64 | 2021.23 | 1853.21 | 0.012932 |
| Dis3l2 | DIS3 mitotic control homolog (<i>S. cerevisiae</i>)-like 2 | 22.52 | 13.10 | 10.56 | 8.96 | 0.023053 |
| DXBay18 | predicted gene, EG434795 | 85.05 | 60.95 | 61.43 | 58.60 | 0.020153 |
| EG382156 | predicted gene, EG382156 | 108.32 | 95.02 | 79.15 | 64.20 | 0.021375 |
| Ehbp1l1 | EH domain binding protein 1-like 1 | 201.35 | 165.13 | 163.24 | 154.75 | 0.029881 |
| Ehd1 | EH-domain containing 1 | 149.69 | 117.64 | 114.29 | 103.18 | 0.024332 |
| Eif2c4 | eukaryotic translation initiation factor 2C, 4 | 410.48 | 380.66 | 360.66 | 339.50 | 0.042629 |
| Elovl5 | ELOVL family member 5, elongation of long chain fatty acids (| 3668.33 | 3387.12 | 3089.62 | 2930.38 | 0.00034 |
| Elovl5 | ELOVL family member 5, elongation of long chain fatty acids (| 3609.77 | 3415.45 | 2894.64 | 2774.18 | 0.000358 |
| Epn2 | epsin 2 | 1735.08 | 1575.87 | 1627.95 | 1549.88 | 0.009089 |
| Fabp7 | fatty acid binding protein 7, brain | 2136.95 | 1675.12 | 1757.66 | 1347.31 | 0.000178 |
| Fads2 | fatty acid desaturase 2 | 2311.11 | 1952.03 | 1919.16 | 1874.19 | 0.000397 |
| Fads2 | fatty acid desaturase 2 | 2117.72 | 1851.68 | 1848.49 | 1692.72 | 0.031765 |
| Fasn | fatty acid synthase | 2934.09 | 2393.11 | 2367.63 | 2279.59 | 0.000388 |
| Fgf14 | fibroblast growth factor 14 | 140.87 | 111.79 | 117.23 | 119.03 | 0.003548 |
| Fosb | FBJ osteosarcoma oncogene B | 302.29 | 247.88 | 179.72 | 200.31 | 0.00054 |

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|--------------|---|---------|---------|---------|---------|----------|
| Fosl2 | fos-like antigen 2 | 1008.05 | 940.13 | 833.79 | 807.96 | 0.004885 |
| Foxe3 | forkhead box E3 | 6.66 | 4.30 | 5.16 | 3.68 | 0.014547 |
| Galnt7 | UDP-N-acetyl-alpha-D-galactosamine: polypeptide N-acetylga | 495.51 | 474.49 | 465.59 | 415.41 | 0.040164 |
| Gats | opposite strand transcription unit to Stag3 | 1285.26 | 1205.45 | 1255.43 | 1096.93 | 0.019987 |
| Gfod1 | glucose-fructose oxidoreductase domain containing 1 | 1741.37 | 1476.57 | 1519.10 | 1501.29 | 0.004543 |
| Gpam | glycerol-3-phosphate acyltransferase, mitochondrial | 1846.06 | 1618.34 | 1636.80 | 1586.46 | 0.001719 |
| Helz | helicase with zinc finger domain | 1414.94 | 1358.87 | 1419.47 | 1203.02 | 0.015606 |
| Iapp | islet amyloid polypeptide | 6.61 | 3.85 | 2.09 | 1.33 | 0.024061 |
| Ids | iduronate 2-sulfatase | 18.77 | 7.54 | 11.59 | 4.75 | 0.008639 |
| Ier5l | immediate early response 5-like | 465.49 | 376.02 | 387.74 | 357.99 | 0.010579 |
| Ipmk | inositol polyphosphate multikinase | 420.76 | 404.85 | 371.72 | 365.09 | 0.004057 |
| Jhdm1d | jumonji C domain-containing histone demethylase 1 homolog | 2115.07 | 1961.13 | 1886.42 | 1798.47 | 0.023415 |
| Kcnp2 | Kv channel-interacting protein 2 | 4025.16 | 3614.22 | 3936.97 | 3365.86 | 0.007364 |
| Klf2 | Kruppel-like factor 2 (lung) | 375.71 | 360.24 | 227.70 | 248.15 | 0.004018 |
| Klf4 | Kruppel-like factor 4 (gut) | 374.97 | 312.24 | 188.01 | 205.05 | 0.001352 |
| Klhl25 | kelch-like 25 (Drosophila) | 269.42 | 212.87 | 241.03 | 216.56 | 0.013381 |
| Ksr1 | kinase suppressor of ras 1 | 573.72 | 537.85 | 493.90 | 474.21 | 0.031635 |
| L2hgdh | L-2-hydroxyglutarate dehydrogenase | 569.67 | 479.27 | 501.33 | 454.62 | 0.000867 |
| Lace1 | lactation elevated 1 | 636.37 | 609.02 | 607.12 | 536.77 | 0.015996 |
| Lamb1-1 | laminin B1 subunit 1 | 191.63 | 153.86 | 141.60 | 128.78 | 0.037437 |
| LOC100046837 | spermine binding protein | 24.31 | 17.72 | 21.71 | 8.04 | 0.036339 |
| LOC100047604 | tumor necrosis factor superfamily, member 5-induced protein | 1474.01 | 1464.15 | 1443.54 | 1329.90 | 0.019121 |
| LOC100048307 | solute carrier family 35, member F2 | 51.18 | 47.01 | 51.16 | 33.50 | 0.006953 |
| LOC100048526 | neuralized-like homolog (Drosophila) | 3628.30 | 3414.59 | 3584.92 | 3285.12 | 0.021984 |
| Lypd5 | Ly6/Plaur domain containing 5 | 25.60 | 31.15 | 24.17 | 10.40 | 0.00478 |
| Map4k5 | mitogen-activated protein kinase kinase kinase kinase 5 | 1167.58 | 1081.20 | 1074.69 | 1037.97 | 0.0153 |
| Mapk8ip1 | mitogen activated protein kinase 8 interacting protein 1 | 2978.65 | 2547.62 | 2722.54 | 2603.36 | 0.005757 |
| Mboat5 | membrane bound O-acyltransferase domain containing 5 | 901.10 | 763.90 | 689.93 | 655.12 | 0.000423 |
| Mettl3 | methyltransferase-like 3 | 650.33 | 588.84 | 571.90 | 551.01 | 0.018718 |

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|---------|---|---------|---------|---------|---------|----------|
| Mex3c | mex3 homolog C (<i>C. elegans</i>) | 2420.81 | 2212.56 | 2216.51 | 2131.99 | 0.012883 |
| Mgea5 | meningioma expressed antigen 5 (hyaluronidase) | 2000.30 | 1821.76 | 1832.01 | 1754.15 | 0.007233 |
| Mid1ip1 | Mid1 interacting protein 1 (gastrulation specific G12-like (zeb | 4825.92 | 3666.49 | 3527.21 | 3288.69 | 5.05E-05 |
| Mknk2 | MAP kinase-interacting serine/threonine kinase 2 | 1014.50 | 1008.17 | 900.58 | 836.35 | 0.004211 |
| Mon1a | MON1 homolog A (yeast) | 662.52 | 560.87 | 589.38 | 565.77 | 0.002321 |
| Mrpl47 | mitochondrial ribosomal protein L47 | 91.04 | 58.89 | 31.96 | 42.71 | 0.007503 |
| Mrps17 | mitochondrial ribosomal protein S17 | 1699.67 | 1633.81 | 1631.49 | 1574.24 | 0.049703 |
| Mterf | mitochondrial transcription termination factor | 274.05 | 249.38 | 228.67 | 207.68 | 0.002736 |
| Mylip | myosin regulatory light chain interacting protein | 1221.55 | 1072.69 | 1048.72 | 1020.21 | 0.008596 |
| Narg1 | NMDA receptor-regulated gene 1 | 1405.10 | 1294.31 | 1256.25 | 1269.43 | 0.002888 |
| Nedd4l | neural precursor cell expressed, developmentally down-regul | 1238.02 | 1026.84 | 1042.64 | 991.95 | 0.018693 |
| Neurl | neuralized-like homolog (<i>Drosophila</i>) | 365.04 | 335.67 | 323.50 | 300.99 | 0.015382 |
| Nin | ninein | 301.59 | 254.63 | 240.37 | 245.66 | 0.015241 |
| Nipbl | Nipped-B homolog (<i>Drosophila</i>) | 458.78 | 442.18 | 419.67 | 378.28 | 0.006025 |
| Noc2l | nucleolar complex associated 2 homolog (<i>S. cerevisiae</i>) | 404.71 | 381.29 | 339.24 | 341.20 | 0.015639 |
| Nostrin | nitric oxide synthase trafficker | 134.44 | 95.59 | 72.51 | 73.85 | 0.002643 |
| Nptx1 | neuronal pentraxin 1 | 5378.44 | 4815.27 | 4995.51 | 4525.65 | 0.021715 |
| Nr4a2 | nuclear receptor subfamily 4, group A, member 2 | 1156.87 | 937.82 | 756.71 | 645.85 | 0.005399 |
| Nr4a3 | nuclear receptor subfamily 4, group A, member 3 | 2682.82 | 2164.50 | 1984.42 | 2069.05 | 0.001604 |
| Nr6a1 | nuclear receptor subfamily 6, group A, member 1 | 268.58 | 228.08 | 230.77 | 216.63 | 0.022359 |
| Osr2 | odd-skipped related 2 (<i>Drosophila</i>) | 8.34 | 2.37 | 2.69 | 2.46 | 0.009612 |
| P4ha1 | procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4- | 830.23 | 757.41 | 648.35 | 652.36 | 0.016228 |
| P4ha3 | procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4- | 47.85 | 41.74 | 44.26 | 28.75 | 0.046232 |
| Panx2 | pannexin 2 | 678.13 | 558.34 | 604.49 | 551.15 | 0.000623 |
| Pcdha11 | protocadherin alpha 11 | 61.91 | 60.54 | 49.82 | 38.77 | 0.016704 |
| Pcgf6 | polycomb group ring finger 6 | 1082.54 | 962.37 | 938.68 | 905.43 | 0.001854 |
| Pdcd4 | programmed cell death 4 | 3302.73 | 3062.62 | 2979.74 | 2988.96 | 0.017684 |
| Pde4dip | phosphodiesterase 4D interacting protein (myomegalin) | 1579.07 | 1446.06 | 1515.22 | 1418.99 | 0.005005 |
| Pdlim4 | PDZ and LIM domain 4 | 489.76 | 472.73 | 421.77 | 409.78 | 0.00492 |

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|-----------|---|---------|---------|---------|---------|----------|
| Peo1 | progressive external ophthalmoplegia 1 (human) | 364.19 | 312.14 | 323.45 | 294.33 | 0.039277 |
| Pex6 | peroxisomal biogenesis factor 6 | 446.44 | 367.44 | 398.82 | 388.00 | 0.000262 |
| Pex6 | peroxisomal biogenesis factor 6 | 1146.36 | 954.19 | 1009.86 | 916.79 | 0.018301 |
| Pitpnm3 | PITPNM family member 3 | 5.14 | 4.04 | 4.74 | 3.25 | 0.033165 |
| Plekhm2 | pleckstrin homology domain containing, family M (with RUN d | 557.98 | 477.84 | 484.71 | 471.07 | 0.013276 |
| Pou3f3 | POU domain, class 3, transcription factor 3 | 3122.36 | 2870.45 | 2935.83 | 2858.32 | 0.007619 |
| Ppifos | peptidylprolyl isomerase F, opposite strand transcription unit | 20.31 | 19.08 | 8.34 | 10.39 | 0.002681 |
| Ppp2r4 | protein phosphatase 2A, regulatory subunit B (PR 53) | 1934.17 | 1703.63 | 1739.39 | 1592.05 | 0.012475 |
| Prosapip1 | ProSAPiP1 protein | 3194.27 | 2990.84 | 3072.69 | 2915.31 | 0.007998 |
| Pscd3 | pleckstrin homology, Sec7 and coiled-coil domains 3 | 1372.51 | 1254.82 | 1175.65 | 1223.25 | 0.001755 |
| Rap1gap | Rap1 GTPase-activating protein | 2488.96 | 2051.52 | 2194.96 | 2152.85 | 0.002855 |
| Rasl10a | RAS-like, family 10, member A | 1206.56 | 993.56 | 1055.63 | 874.61 | 0.038252 |
| Rbm12 | RNA binding motif protein 12 | 617.72 | 570.91 | 473.40 | 538.42 | 0.000461 |
| Rbm39 | RNA binding motif protein 39 | 2870.33 | 2662.76 | 2642.06 | 2576.14 | 0.016291 |
| Rpa3 | replication protein A3 | 363.97 | 332.73 | 350.76 | 320.64 | 0.015259 |
| Rutbc2 | RUN and TBC1 domain containing 2 | 912.00 | 843.33 | 841.40 | 767.31 | 0.009769 |
| Scd1 | stearoyl-Coenzyme A desaturase 1 | 6137.22 | 4149.38 | 3018.74 | 2805.52 | 1.08E-07 |
| Scd1 | stearoyl-Coenzyme A desaturase 1 | 901.50 | 585.75 | 417.38 | 397.53 | 8.59E-06 |
| Scd2 | stearoyl-Coenzyme A desaturase 2 | 9749.67 | 7894.95 | 7933.98 | 7442.07 | 0.002558 |
| Scd2 | stearoyl-Coenzyme A desaturase 2 | 3139.50 | 2437.48 | 2290.58 | 2239.79 | 0.006399 |
| Scrn3 | secernin 3 | 1133.78 | 1029.35 | 1029.37 | 901.49 | 0.002328 |
| Sesn3 | sestrin 3 | 1777.97 | 1711.19 | 1720.90 | 1516.03 | 0.040651 |
| Sf3b1 | splicing factor 3b, subunit 1 | 3508.36 | 3346.60 | 3370.78 | 3344.86 | 0.005204 |
| Shkbp1 | Sh3kbp1 binding protein 1 | 820.66 | 759.24 | 742.20 | 682.65 | 0.047162 |
| Slc6a5 | solute carrier family 6 (neurotransmitter transporter, glycine) | 13.75 | 8.71 | 8.22 | 4.11 | 0.053111 |
| Snx11 | sorting nexin 11 | 351.72 | 260.61 | 243.35 | 253.40 | 0.000127 |
| Solh | small optic lobes homolog (Drosophila) | 765.59 | 732.63 | 712.53 | 669.64 | 0.00637 |
| Sprp3 | small proline-rich protein 3 | 41.41 | 32.13 | 32.35 | 13.15 | 0.034832 |
| Sreb1 | sterol regulatory element binding factor 1 | 2219.81 | 1471.83 | 1211.95 | 1212.38 | 6.4E-07 |

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|---------|---|---------|---------|---------|---------|----------|
| Ssh2 | slingshot homolog 2 (Drosophila) | 884.51 | 834.36 | 761.86 | 773.51 | 0.003431 |
| Stard9 | START domain containing 9 | 23.25 | 10.68 | 7.08 | 7.82 | 0.011318 |
| Tmem186 | transmembrane protein 186 | 136.88 | 120.75 | 121.84 | 101.70 | 0.039487 |
| Tmem39a | transmembrane protein 39a | 217.51 | 188.96 | 191.31 | 160.17 | 0.007808 |
| Ttc14 | tetratricopeptide repeat domain 14 | 709.47 | 545.76 | 554.91 | 513.39 | 0.014882 |
| Ube2u | ubiquitin-conjugating enzyme E2U (putative) | 24.48 | 16.52 | 17.93 | 8.46 | 0.031754 |
| Xpo7 | exportin 7 | 20.62 | 19.65 | 16.04 | 11.53 | 0.02615 |
| Yy1 | YY1 transcription factor | 1418.05 | 1360.60 | 1346.13 | 1308.46 | 0.034813 |
| Zfp654 | zinc finger protein 654 | 503.77 | 424.10 | 397.52 | 411.85 | 0.00706 |
| Znrf1 | zinc and ring finger 1 | 399.40 | 321.68 | 317.74 | 316.56 | 0.001309 |
| Zswim6 | zinc finger, SWIM domain containing 6 | 1946.41 | 1675.83 | 1670.06 | 1634.04 | 0.018206 |

Downregulated by 20 mg/kg TO901317

| Symbol | Title | 20mg TO | 5mg TO | Fish Oil | Control | ANOVA |
|----------|--|---------|---------|----------|---------|----------|
| AI447881 | expressed sequence AI447881 | 121.03 | 142.50 | 162.74 | 154.51 | 0.007904 |
| AI593442 | expressed sequence AI593442 | 2138.25 | 2149.53 | 2196.38 | 2407.32 | 0.033239 |
| AI607873 | expressed sequence AI607873 | 1.13 | 5.84 | 3.25 | 9.00 | 0.032481 |
| Aifm2 | apoptosis-inducing factor, mitochondrion-associated 2 | 66.78 | 73.83 | 76.09 | 92.28 | 0.015743 |
| Akna | AT-hook transcription factor | 35.90 | 54.58 | 54.57 | 72.87 | 0.02502 |
| Apcdd1 | adenomatosis polyposis coli down-regulated 1 | 151.18 | 170.12 | 190.65 | 192.16 | 0.002939 |
| Apcdd1 | adenomatosis polyposis coli down-regulated 1 | 481.49 | 566.46 | 592.43 | 634.50 | 0.033509 |
| Arfgef1 | ADP-ribosylation factor guanine nucleotide-exchange factor 1 | 36.51 | 40.10 | 44.08 | 55.36 | 0.032214 |
| Asah3l | N-acylsphingosine amidohydrolase 3-like | 10.06 | 16.70 | 20.56 | 36.06 | 0.036015 |
| Bat5 | HLA-B associated transcript 5 | 1267.68 | 1290.09 | 1311.65 | 1392.51 | 0.016865 |
| BB031773 | expressed sequence BB031773 | 2.43 | 1.73 | 3.69 | 10.58 | 0.00362 |
| BC005512 | cDNA sequence BC005512 | 72.67 | 79.47 | 100.52 | 106.31 | 0.012087 |
| BC048546 | cDNA sequence BC048546 | 649.20 | 767.46 | 868.35 | 867.38 | 0.016129 |
| Bmpr1a | Bone morphogenetic protein receptor, type 1A | 14.08 | 27.26 | 14.69 | 35.78 | 0.002963 |
| Ccbl1 | cysteine conjugate-beta lyase 1 | 57.98 | 68.26 | 71.79 | 85.74 | 0.032401 |

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|--------------|--|---------|---------|---------|---------|----------|
| Ccdc111 | coiled-coil domain containing 111 | 76.26 | 84.71 | 96.41 | 105.36 | 0.01036 |
| Chi3l4 | chitinase 3-like 4 | 7.24 | 17.34 | 12.77 | 15.56 | 0.003003 |
| Cmah | cytidine monophospho-N-acetylneuraminic acid hydroxylase | 4.95 | 12.76 | 10.57 | 24.19 | 0.022832 |
| Cno | cappuccino | 1388.74 | 1475.09 | 1410.15 | 1576.59 | 0.022712 |
| Cox10 | COX10 homolog, cytochrome c oxidase assembly protein, her | 16.46 | 26.59 | 26.23 | 34.47 | 0.011122 |
| Cpz | carboxypeptidase Z | 3.34 | 2.28 | 2.08 | 4.86 | 0.000141 |
| Dclk2 | doublecortin-like kinase 2 | 13.31 | 16.91 | 15.03 | 27.17 | 0.010952 |
| Dld | dihydrolipoamide dehydrogenase | 1787.06 | 1825.17 | 1785.26 | 1932.60 | 0.017525 |
| Dph3 | DPH3 homolog (KTI11, <i>S. cerevisiae</i>) | 201.89 | 209.61 | 216.60 | 227.62 | 0.03388 |
| EG237412 | Predicted gene, EG237412 | 48.80 | 60.02 | 70.55 | 71.03 | 0.02044 |
| EG436523 | protease, serine, 3 | 4.14 | 2.41 | 5.51 | 12.91 | 0.002239 |
| EG666827 | predicted gene, EG666827 | 9.40 | 10.72 | 8.80 | 25.32 | 0.023432 |
| Eny2 | enhancer of yellow 2 homolog (<i>Drosophila</i>) | 304.04 | 346.26 | 331.07 | 398.33 | 0.000808 |
| Exoc6 | exocyst complex component 6 | 77.20 | 88.94 | 85.78 | 102.68 | 0.00849 |
| Fzd8 | frizzled homolog 8 (<i>Drosophila</i>) | 27.23 | 39.46 | 34.17 | 52.15 | 0.006054 |
| Gh | growth hormone | 3.48 | 2.71 | 4.94 | 9.53 | 0.002668 |
| Gja4 | gap junction membrane channel protein alpha 4 | 60.89 | 70.67 | 72.64 | 80.36 | 0.043354 |
| Gnptg | N-acetylglucosamine-1-phosphotransferase, gamma subunit | 603.20 | 680.33 | 646.04 | 682.30 | 0.021553 |
| Helb | helicase (DNA) B | 47.46 | 67.91 | 57.45 | 82.84 | 0.027966 |
| Herpud2 | HERPUD family member 2 | 3.92 | 8.87 | 5.51 | 9.04 | 0.001146 |
| Hmgb3 | high mobility group box 3 | 756.79 | 853.66 | 766.84 | 830.31 | 0.000331 |
| Il33 | interleukin 33 | 1237.17 | 1389.28 | 1436.35 | 1592.22 | 0.00723 |
| Itgb3 | integrin beta 3 | 4.33 | 5.57 | 5.25 | 8.74 | 0.046618 |
| Kcna4 | potassium voltage-gated channel, shaker-related subfamily, n | 294.13 | 321.62 | 323.33 | 371.58 | 0.03932 |
| Kcne4 | potassium voltage-gated channel, Isk-related subfamily, gene | 43.55 | 80.23 | 76.16 | 93.08 | 0.003626 |
| Klhl21 | kelch-like 21 (<i>Drosophila</i>) | 164.69 | 189.61 | 184.59 | 203.77 | 0.029126 |
| LOC100042741 | zinc finger protein 706 | 13.64 | 21.64 | 17.25 | 30.34 | 0.016347 |
| LOC100043998 | translocated promoter region | 711.82 | 714.61 | 730.04 | 831.99 | 0.030071 |
| LOC620016 | thioredoxin-like 2 | 39.66 | 62.31 | 37.95 | 67.35 | 0.009838 |

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|-----------|--|---------|---------|---------|---------|----------|
| LOC620966 | transmembrane protein 189 | 217.21 | 271.28 | 240.15 | 292.97 | 0.033338 |
| Lonp1 | lon peptidase 1, mitochondrial | 665.36 | 746.93 | 818.41 | 856.67 | 0.035169 |
| Lrrc56 | leucine rich repeat containing 56 | 91.57 | 102.96 | 93.50 | 111.54 | 0.021406 |
| Lrrc8a | leucine rich repeat containing 8A | 695.53 | 740.60 | 701.89 | 817.44 | 0.000236 |
| Lss | lanosterol synthase | 176.21 | 195.02 | 206.97 | 203.16 | 0.004343 |
| Lyplal1 | lysophospholipase-like 1 | 326.71 | 395.87 | 396.77 | 470.02 | 0.014912 |
| Man1a | mannosidase 1, alpha | 716.21 | 800.77 | 805.12 | 912.47 | 0.048468 |
| Metrn1 | meteorin, glial cell differentiation regulator-like | 189.74 | 212.41 | 207.96 | 245.84 | 0.031923 |
| Mia3 | melanoma inhibitory activity 3 | 527.96 | 533.05 | 585.67 | 691.41 | 0.013809 |
| Mmp19 | matrix metalloproteinase 19 | 11.01 | 26.38 | 19.90 | 24.61 | 0.008594 |
| Mpzl1 | myelin protein zero-like 1 | 203.85 | 233.96 | 214.28 | 289.89 | 0.01312 |
| Mycn | v-myc myelocytomatosis viral related oncogene, neuroblastoma | 80.49 | 91.34 | 113.79 | 172.75 | 0.037462 |
| Naglu | alpha-N-acetylglucosaminidase (Sanfilippo disease IIIB) | 120.77 | 167.95 | 190.39 | 167.19 | 0.000327 |
| Nlrp6 | NLR family, pyrin domain containing 6 | 50.29 | 44.90 | 74.12 | 79.30 | 0.00241 |
| Ntf5 | neurotrophin 5 | 20.72 | 35.59 | 35.19 | 35.50 | 0.010026 |
| Pcdhb16 | protocadherin beta 16 | 240.71 | 274.88 | 299.57 | 318.17 | 0.035633 |
| Pex6 | peroxisomal biogenesis factor 6 | 295.22 | 321.46 | 369.02 | 356.97 | 0.003104 |
| Pgm2l1 | phosphoglucomutase 2-like 1 | 1090.19 | 1118.92 | 1114.79 | 1208.20 | 0.013229 |
| Pigl | Phosphatidylinositol glycan anchor biosynthesis, class L | 173.25 | 185.89 | 202.01 | 214.53 | 0.035858 |
| Pms2 | postmeiotic segregation increased 2 (<i>S. cerevisiae</i>) | 45.68 | 53.18 | 55.23 | 62.46 | 0.03144 |
| Pon2 | paraoxonase 2 | 22.91 | 35.94 | 34.48 | 33.68 | 0.004934 |
| Ppargc1a | Peroxisome proliferative activated receptor, gamma, coactivator 1A | 937.44 | 1034.70 | 943.45 | 1125.18 | 0.019328 |
| Ppargc1a | peroxisome proliferative activated receptor, gamma, coactivator 1A | 737.68 | 809.04 | 775.22 | 890.17 | 0.049542 |
| Prodh | proline dehydrogenase | 363.99 | 490.16 | 454.48 | 511.30 | 0.02207 |
| Prss21 | protease, serine, 21 | 15.05 | 29.20 | 23.98 | 36.30 | 0.013856 |
| Psmd12 | proteasome (prosome, macropain) 26S subunit, non-ATPase, 12S | 1916.45 | 2084.09 | 2065.20 | 2114.36 | 0.015833 |
| Pycard | PYD and CARD domain containing | 9.00 | 16.22 | 15.06 | 29.62 | 0.009378 |
| Rai14 | Retinoic acid induced 14 | 67.66 | 94.21 | 108.90 | 107.00 | 0.00053 |
| Ranbp17 | RAN binding protein 17 | 36.41 | 40.81 | 36.00 | 56.16 | 0.030551 |

| | | | | | | |
|----------|---|---------|---------|---------|---------|----------|
| Rbm34 | RNA binding motif protein 34 | 270.64 | 327.40 | 286.96 | 351.50 | 0.018318 |
| Ripk5 | receptor interacting protein kinase 5 | 540.87 | 575.60 | 597.19 | 638.07 | 0.025676 |
| Sc4mol | Sterol-C4-methyl oxidase-like | 28.84 | 40.00 | 36.33 | 52.35 | 0.044309 |
| Sdccag10 | serologically defined colon cancer antigen 10 | 233.55 | 252.95 | 228.69 | 281.03 | 0.011923 |
| Sin3b | transcriptional regulator, SIN3B (yeast) | 614.50 | 704.58 | 658.65 | 711.02 | 0.021218 |
| Skap1 | src family associated phosphoprotein 1 | 3.25 | 3.88 | 7.51 | 14.59 | 0.02116 |
| Slbp | stem-loop binding protein | 70.41 | 89.19 | 92.57 | 104.66 | 0.028379 |
| Slc5a4b | solute carrier family 5 (neutral amino acid transporters, syste | 4.20 | 7.66 | 7.88 | 11.30 | 0.037169 |
| Slc9a9 | solute carrier family 9 (sodium/hydrogen exchanger), isoform | 19.36 | 22.94 | 27.55 | 42.19 | 0.002057 |
| Slit2 | slit homolog 2 (Drosophila) | 199.66 | 234.58 | 214.13 | 254.03 | 0.027979 |
| Smpd2 | sphingomyelin phosphodiesterase 2, neutral | 299.44 | 344.29 | 354.09 | 367.73 | 0.0217 |
| Snx2 | sorting nexin 2 | 2169.21 | 2584.19 | 2311.08 | 2671.78 | 0.017994 |
| Sorcs3 | sortilin-related VPS10 domain containing receptor 3 | 583.52 | 672.92 | 643.02 | 699.43 | 0.029766 |
| Spata6 | spermatogenesis associated 6 | 1.90 | 3.94 | 1.63 | 9.12 | 9.5E-05 |
| St6gal1 | beta galactoside alpha 2,6 sialyltransferase 1 | 690.83 | 754.52 | 704.24 | 783.63 | 0.02047 |
| Steap2 | six transmembrane epithelial antigen of prostate 2 | 106.29 | 197.87 | 170.62 | 175.50 | 0.000472 |
| Susd3 | sushi domain containing 3 | 13.50 | 12.04 | 16.19 | 35.37 | 0.008674 |
| Tacc3 | transforming, acidic coiled-coil containing protein 3 | 20.89 | 37.15 | 47.67 | 62.96 | 0.044743 |
| Taf4b | TAF4B RNA polymerase II, TATA box binding protein (TBP)-ass | 120.33 | 121.48 | 142.37 | 181.11 | 0.000596 |
| Taf4b | TAF4B RNA polymerase II, TATA box binding protein (TBP)-ass | 240.69 | 264.14 | 277.33 | 293.22 | 0.021062 |
| Tbccd1 | TBCC domain containing 1 | 273.07 | 301.73 | 307.73 | 317.60 | 0.019156 |
| Tdrd1 | tudor domain containing 1 | 3.04 | 4.13 | 4.19 | 7.17 | 0.028537 |
| Tff3 | trefoil factor 3, intestinal | 15.09 | 17.48 | 14.45 | 46.46 | 0.002998 |
| Timeless | timeless homolog (Drosophila) | 39.90 | 46.52 | 64.24 | 63.44 | 0.010014 |
| Timp4 | tissue inhibitor of metalloproteinase 4 | 983.77 | 1147.80 | 1081.83 | 1182.70 | 0.021933 |
| Tm9sf1 | transmembrane 9 superfamily member 1 | 752.77 | 827.37 | 799.52 | 868.17 | 0.037961 |
| Tm9sf3 | transmembrane 9 superfamily member 3 | 2001.88 | 2116.36 | 2020.17 | 2189.03 | 0.006935 |
| Tmem184a | transmembrane protein 184a | 13.31 | 44.98 | 39.87 | 36.62 | 0.000742 |
| Trim59 | tripartite motif-containing 59 | 536.92 | 627.91 | 664.81 | 772.79 | 0.026322 |

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|----------|---|---------|---------|---------|---------|----------|
| Trp53 | transformation related protein 53 | 1.21 | 4.30 | 4.80 | 12.37 | 0.013844 |
| Usp7 | ubiquitin specific peptidase 7 | 1599.83 | 1636.72 | 1671.67 | 1918.09 | 0.01381 |
| V1rc22 | vomeronal 1 receptor, C8 | 1.82 | 0.66 | 1.24 | 7.97 | 0.00371 |
| Vnn3 | vanin 3 | 10.67 | 19.94 | 14.52 | 37.95 | 0.042264 |
| Vps11 | vacuolar protein sorting 11 (yeast) | 614.74 | 646.49 | 635.11 | 717.46 | 0.009517 |
| Wnt9b | wingless-type MMTV integration site 9B | 23.54 | 41.43 | 28.79 | 54.07 | 0.018582 |
| Xlr5a | X-linked lymphocyte-regulated 5D, pseudogene | 8.47 | 10.41 | 9.01 | 34.71 | 0.027403 |
| Zfp318 | zinc finger protein 318 | 292.49 | 337.12 | 337.16 | 391.04 | 0.01343 |
| Zkscan17 | zinc finger with KRAB and SCAN domains 17 | 293.18 | 327.60 | 326.44 | 338.42 | 0.036062 |
| Zw10 | ZW10 homolog (Drosophila), centromere/kinetochore protein | 28.58 | 33.17 | 38.44 | 59.41 | 0.005121 |

Upregulated by 5mg/kg TO901317

| Symbol | Title | 20mg TO | 5mg TO | Fish Oil | Control | ANOVA |
|---------------|---|----------------|---------------|-----------------|----------------|--------------|
| AA517545 | expressed sequence AA517545 | 0.83 | 6.31 | 2.49 | 0.48 | 0.025529 |
| Aak1 | AP2 associated kinase 1 | 1852.15 | 1873.98 | 1852.11 | 1562.58 | 0.02288 |
| Abca1 | ATP-binding cassette, sub-family A (ABC1), member 1 | 4361.42 | 2659.88 | 1808.92 | 1627.30 | 5.72E-09 |
| Abcc6 | ATP-binding cassette, sub-family C (CFTR/MRP), member 6 | 31.44 | 37.27 | 29.60 | 18.71 | 0.035429 |
| AI594671 | expressed sequence AI594671 | 1.06 | 4.14 | 0.22 | 0.62 | 0.000316 |
| AI853363 | expressed sequence AI853363 | 308.40 | 346.27 | 310.23 | 274.65 | 0.034434 |
| Ankrd27 | ankyrin repeat domain 27 (VPS9 domain) | 675.12 | 744.83 | 669.83 | 639.08 | 0.03258 |
| Aoah | acyloxyacyl hydrolase | 3.20 | 14.55 | 4.67 | 4.92 | 0.001392 |
| Aox3 | aldehyde oxidase 3 | 23.68 | 51.86 | 31.78 | 28.45 | 0.003504 |
| Atp6v0e | ATPase, H+ transporting, lysosomal V0 subunit E | 1288.95 | 1518.46 | 1379.89 | 1307.03 | 0.00936 |
| C77545 | expressed sequence C77545 | 19.88 | 34.21 | 14.07 | 11.65 | 0.031372 |
| C79407 | expressed sequence C79407 | 17.97 | 21.26 | 5.17 | 10.11 | 0.000955 |
| Capns2 | calpain, small subunit 2 | 5.13 | 14.77 | 7.17 | 4.02 | 0.017364 |
| Card14 | caspase recruitment domain family, member 14 | 39.49 | 71.02 | 40.28 | 15.98 | 0.022934 |
| Cbwd1 | COBW domain containing 1 | 217.94 | 222.96 | 206.13 | 196.66 | 0.032785 |

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|--------------|--|---------|---------|---------|---------|----------|
| Ceacam11 | CEA-related cell adhesion molecule 11 | 5.00 | 9.33 | 4.10 | 1.64 | 0.011907 |
| Chrdl2 | chordin-like 2 | 37.39 | 41.18 | 33.17 | 22.87 | 0.015622 |
| Cnksr3 | Cnksr family member 3 | 219.06 | 260.09 | 214.82 | 196.52 | 0.043207 |
| Cnot3 | CCR4-NOT transcription complex, subunit 3 | 1249.37 | 1300.11 | 1110.27 | 1105.16 | 0.011897 |
| Cth | cystathionase (cystathionine gamma-lyase) | 160.28 | 193.89 | 163.08 | 163.59 | 0.004497 |
| Ctsq | cathepsin Q | 3.88 | 11.10 | 6.09 | 4.91 | 0.009635 |
| Cyp1a2 | cytochrome P450, family 1, subfamily a, polypeptide 2 | 2.86 | 4.79 | 3.42 | 2.41 | 0.004551 |
| D2Ert63e | DNA segment, Chr 2, ERATO Doi 63, expressed | 32.44 | 60.76 | 51.52 | 28.56 | 0.001697 |
| Dhx37 | DEAH (Asp-Glu-Ala-His) box polypeptide 37 | 69.81 | 87.86 | 74.25 | 64.76 | 0.014397 |
| Dnajc1 | DnaJ (Hsp40) homolog, subfamily C, member 1 | 601.27 | 644.30 | 578.86 | 542.54 | 0.019817 |
| EG545645 | interferon zeta | 53.49 | 64.08 | 49.52 | 34.82 | 0.019128 |
| Eif2b5 | Eukaryotic translation initiation factor 2B, subunit 5 epsilon | 22.94 | 41.49 | 16.21 | 18.62 | 0.013708 |
| Elov5 | ELOVL family member 5, elongation of long chain fatty acids (| 3668.33 | 3387.12 | 3089.62 | 2930.38 | 0.00034 |
| Elov5 | ELOVL family member 5, elongation of long chain fatty acids (| 3609.77 | 3415.45 | 2894.64 | 2774.18 | 0.000358 |
| Fads3 | fatty acid desaturase 3 | 327.84 | 391.56 | 367.67 | 340.24 | 0.002894 |
| Ftsj1 | FtsJ homolog 1 (E. coli) | 33.51 | 37.91 | 30.30 | 17.44 | 0.038583 |
| Gcnt2 | glucosaminyl (N-acetyl) transferase 2, I-branching enzyme | 77.77 | 94.77 | 83.04 | 78.33 | 0.015218 |
| Gemin8 | gem (nuclear organelle) associated protein 8 | 213.96 | 246.78 | 198.01 | 196.14 | 0.015189 |
| H47 | histocompatibility 47 | 383.42 | 428.47 | 363.46 | 365.37 | 0.003072 |
| Hax1 | HCLS1 associated X-1 | 1830.64 | 1948.69 | 1741.85 | 1744.30 | 0.001542 |
| Hoxd8 | homeo box D8 | 9.94 | 19.17 | 8.56 | 3.30 | 0.018567 |
| Hsd17b3 | hydroxysteroid (17-beta) dehydrogenase 3 | 37.59 | 45.09 | 32.65 | 31.18 | 0.026217 |
| Hspa5 | heat shock protein 5 | 3510.43 | 4061.92 | 3669.38 | 3077.46 | 0.049819 |
| Htra3 | HtrA serine peptidase 3 | 13.35 | 30.62 | 20.41 | 10.66 | 0.024904 |
| Igfbp3 | insulin-like growth factor binding protein 3 | 268.03 | 344.45 | 297.60 | 264.60 | 0.007748 |
| Krtap16-10 | keratin associated protein 16-10 | 1.52 | 5.31 | 1.95 | 1.22 | 0.020851 |
| Lipa | lysosomal acid lipase A | 173.69 | 209.95 | 161.37 | 164.59 | 0.010178 |
| LOC100045903 | Y box protein 2 | 107.73 | 147.23 | 130.76 | 101.80 | 0.012781 |
| LOC100047604 | tumor necrosis factor superfamily, member 5-induced protein | 1474.01 | 1464.15 | 1443.54 | 1329.90 | 0.019121 |

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|--------------|--|---------|---------|---------|---------|----------|
| LOC100047864 | sorting nexin 6 | 797.22 | 816.56 | 751.15 | 739.78 | 0.022237 |
| LOC666793 | ribosomal protein S24 | 204.20 | 210.67 | 192.48 | 173.55 | 0.041749 |
| Lypd5 | Ly6/Plaur domain containing 5 | 25.60 | 31.15 | 24.17 | 10.40 | 0.00478 |
| Med9 | mediator of RNA polymerase II transcription, subunit 9 homo | 386.65 | 401.96 | 355.73 | 363.09 | 0.008662 |
| Mknk2 | MAP kinase-interacting serine/threonine kinase 2 | 1014.50 | 1008.17 | 900.58 | 836.35 | 0.004211 |
| Ms4a2 | membrane-spanning 4-domains, subfamily A, member 2 | 19.66 | 26.74 | 11.60 | 6.82 | 0.024496 |
| Mtac2d1 | membrane targeting (tandem) C2 domain containing 1 | 3.50 | 15.80 | 12.97 | 9.34 | 0.000153 |
| Mxd3 | Max dimerization protein 3 | 11.85 | 36.21 | 13.43 | 15.92 | 0.001875 |
| Mycbpap | Mycbp associated protein | 60.76 | 67.20 | 63.40 | 40.38 | 0.040483 |
| Ncor2 | nuclear receptor co-repressor 2 | 2677.43 | 2834.84 | 2592.89 | 2480.27 | 0.045908 |
| Nipbl | Nipped-B homolog (Drosophila) | 458.78 | 442.18 | 419.67 | 378.28 | 0.006025 |
| Pcdha11 | protocadherin alpha 11 | 61.91 | 60.54 | 49.82 | 38.77 | 0.016704 |
| Pcdhgc3 | protocadherin gamma subfamily C, 3 | 23.28 | 32.82 | 34.88 | 14.56 | 0.003274 |
| Phlda2 | pleckstrin homology-like domain, family A, member 2 | 8.52 | 29.77 | 8.49 | 6.72 | 0.009675 |
| Pih1d1 | PIH1 domain containing 1 | 538.14 | 555.26 | 493.52 | 475.65 | 0.011202 |
| Prlr | prolactin receptor | 10.21 | 18.34 | 9.14 | 2.58 | 0.026586 |
| Psen2 | presenilin 2 | 32.39 | 51.30 | 41.57 | 15.83 | 0.041757 |
| Rho | rhodopsin | 23.02 | 37.87 | 19.60 | 12.21 | 0.022813 |
| Samd11 | Sterile alpha motif domain containing 11 | 11.22 | 19.68 | 8.31 | 4.95 | 0.000402 |
| Scd1 | stearoyl-Coenzyme A desaturase 1 | 6137.22 | 4149.38 | 3018.74 | 2805.52 | 1.08E-07 |
| Sec61b | Sec61 beta subunit | 1878.25 | 2044.03 | 1919.92 | 1810.87 | 0.040167 |
| Sfrp5 | secreted frizzled-related sequence protein 5 | 27.94 | 74.54 | 57.12 | 34.11 | 0.004441 |
| Slc6a12 | solute carrier family 6 (neurotransmitter transporter, betaine | 5.93 | 21.36 | 6.35 | 5.44 | 0.010027 |
| Smtnl1 | smoothelin-like 1 | 3.65 | 9.62 | 4.36 | 2.35 | 0.015367 |
| Taar1 | trace amine-associated receptor 1 | 9.19 | 20.23 | 14.16 | 3.85 | 0.029222 |
| Tcf21 | transcription factor 21 | 18.89 | 35.73 | 24.30 | 16.77 | 0.0064 |
| Tdrd7 | Tudor domain containing 7 | 11.29 | 16.66 | 3.41 | 4.69 | 0.002853 |
| Tgm2 | transglutaminase 2, C polypeptide | 176.55 | 238.06 | 222.89 | 131.99 | 0.027168 |
| Tlr6 | toll-like receptor 6 | 14.94 | 28.63 | 14.80 | 12.62 | 0.022113 |

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|---------|---------------------------------------|---------|---------|---------|---------|----------|
| Tmem107 | transmembrane protein 107 | 1622.53 | 1723.12 | 1584.27 | 1466.70 | 0.025672 |
| Tpbpb | trophoblast specific protein beta | 10.00 | 19.38 | 8.13 | 4.94 | 0.004409 |
| Trip6 | thyroid hormone receptor interactor 6 | 282.99 | 301.82 | 271.86 | 238.77 | 0.038617 |
| V1rb3 | vomer nasal 1 receptor, B3 | 11.16 | 17.50 | 7.63 | 6.54 | 0.01258 |
| Wdr20a | WD repeat domain 20a | 426.79 | 468.50 | 405.04 | 396.00 | 0.009532 |
| Wdr46 | WD repeat domain 46 | 106.77 | 129.66 | 136.25 | 75.28 | 0.006602 |
| Zc3h7a | zinc finger CCCH type containing 7 A | 203.07 | 218.37 | 216.66 | 187.86 | 0.030904 |
| Zfp503 | zinc finger protein 503 | 110.73 | 121.07 | 90.47 | 82.85 | 0.019202 |
| Zfp595 | zinc finger protein 595 | 55.72 | 62.88 | 58.54 | 45.14 | 0.024906 |

Downregulated by 5 mg/kg TO901317

| Symbol | Title | 20mg TO | 5mg TO | Fish Oil | Control | ANOVA |
|---------------|---|----------------|---------------|-----------------|----------------|--------------|
| 39697 | septin 6 | 46.41 | 31.03 | 40.95 | 72.77 | 0.019759 |
| Alkbh4 | alkB, alkylation repair homolog 4 (E. coli) | 176.18 | 163.70 | 169.41 | 198.39 | 0.013987 |
| Aspm | asp (abnormal spindle)-like, microcephaly associated (Drosop | 14.52 | 7.58 | 5.53 | 24.38 | 0.014873 |
| BB031773 | expressed sequence BB031773 | 2.43 | 1.73 | 3.69 | 10.58 | 0.00362 |
| BC023202 | cDNA sequence BC023202 | 421.95 | 366.51 | 406.10 | 425.15 | 0.006225 |
| Brf2 | BRF2, subunit of RNA polymerase III transcription initiation fa | 480.46 | 468.41 | 433.07 | 505.20 | 0.000267 |
| Btc | betacellulin, epidermal growth factor family member | 14.82 | 5.24 | 15.62 | 15.18 | 0.007612 |
| C79017 | expressed sequence C79017 | 37.50 | 23.10 | 39.22 | 42.43 | 0.025061 |
| Cdca2 | cell division cycle associated 2 | 23.63 | 18.93 | 25.29 | 36.94 | 0.048656 |
| Chd4 | chromodomain helicase DNA binding protein 4 | 764.11 | 667.17 | 711.25 | 864.09 | 0.023418 |
| Cpz | carboxypeptidase Z | 3.34 | 2.28 | 2.08 | 4.86 | 0.000141 |
| Creb5 | cAMP responsive element binding protein 5 | 21.20 | 16.31 | 25.56 | 29.24 | 0.03202 |
| Crim1 | cysteine rich transmembrane BMP regulator 1 (chordin like) | 1718.32 | 1597.36 | 1763.92 | 1946.41 | 0.02802 |
| Ctse | cathepsin E | 92.91 | 76.96 | 94.66 | 119.74 | 0.003621 |
| Dcpp3 | demilune cell and parotid protein 3 | 69.69 | 58.63 | 80.34 | 97.32 | 0.015668 |
| Dlgap4 | discs, large homolog-associated protein 4 (Drosophila) | 1976.08 | 1849.01 | 2076.77 | 2013.88 | 0.001469 |
| Dusp3 | dual specificity phosphatase 3 (vaccinia virus phosphatase VH | 202.15 | 187.54 | 197.07 | 228.18 | 0.035532 |

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|----------|--|---------|---------|---------|---------|----------|
| EG436523 | protease, serine, 3 | 4.14 | 2.41 | 5.51 | 12.91 | 0.002239 |
| Fubp1 | far upstream element (FUSE) binding protein 1 | 92.44 | 65.25 | 81.60 | 115.71 | 0.020704 |
| Galnt13 | UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgl | 133.21 | 119.29 | 123.66 | 166.72 | 0.010765 |
| Gh | growth hormone | 3.48 | 2.71 | 4.94 | 9.53 | 0.002668 |
| Gzma | granzyme A | 24.12 | 17.46 | 36.55 | 47.34 | 0.037934 |
| Hcn2 | hyperpolarization-activated, cyclic nucleotide-gated K+ 2 | 931.58 | 822.37 | 894.44 | 1005.92 | 0.016535 |
| Igsf11 | immunoglobulin superfamily, member 11 | 733.14 | 685.80 | 721.43 | 798.29 | 0.034041 |
| Kcnn3 | potassium intermediate/small conductance calcium-activated | 8.34 | 5.15 | 6.01 | 9.85 | 0.024959 |
| Large | like-glycosyltransferase | 3798.24 | 3730.51 | 3802.24 | 4001.12 | 0.014267 |
| Lmx1b | LIM homeobox transcription factor 1 beta | 32.59 | 24.70 | 41.32 | 45.44 | 0.035965 |
| Lrrc8a | leucine rich repeat containing 8A | 695.53 | 740.60 | 701.89 | 817.44 | 0.000236 |
| Lrrtm4 | leucine rich repeat transmembrane neuronal 4 | 367.73 | 342.94 | 325.23 | 409.89 | 0.002507 |
| Mia3 | melanoma inhibitory activity 3 | 527.96 | 533.05 | 585.67 | 691.41 | 0.013809 |
| Msi2 | Musashi homolog 2 (Drosophila) | 195.76 | 154.37 | 207.51 | 190.81 | 0.00233 |
| Myoz2 | myozenin 2 | 41.03 | 26.32 | 44.20 | 47.26 | 0.024312 |
| Ndufs1 | NADH dehydrogenase (ubiquinone) Fe-S protein 1 | 46.93 | 35.50 | 55.46 | 68.03 | 0.004473 |
| Nlrp6 | NLR family, pyrin domain containing 6 | 50.29 | 44.90 | 74.12 | 79.30 | 0.00241 |
| Nrcam | neuron-glia-CAM-related cell adhesion molecule | 3505.44 | 3259.95 | 3560.95 | 3624.24 | 0.022995 |
| Oit1 | oncoprotein induced transcript 1 | 11.57 | 6.91 | 9.32 | 22.72 | 0.012023 |
| Prss32 | protease, serine, 32 | 27.03 | 20.93 | 24.49 | 38.82 | 0.04348 |
| Rnd3 | Rho family GTPase 3 | 306.27 | 269.38 | 274.21 | 327.18 | 0.018386 |
| Rora | RAR-related orphan receptor alpha | 83.57 | 78.09 | 90.83 | 107.39 | 0.021273 |
| Skap1 | src family associated phosphoprotein 1 | 3.25 | 3.88 | 7.51 | 14.59 | 0.02116 |
| Sla | src-like adaptor | 116.56 | 89.18 | 97.09 | 128.00 | 0.005752 |
| Slc9a9 | solute carrier family 9 (sodium/hydrogen exchanger), isoform | 19.36 | 22.94 | 27.55 | 42.19 | 0.002057 |
| Soat1 | sterol O-acyltransferase 1 | 61.24 | 54.81 | 56.46 | 91.25 | 0.022985 |
| Sox5 | SRY-box containing gene 5 | 386.45 | 343.14 | 402.92 | 431.46 | 0.049093 |
| Spata6 | spermatogenesis associated 6 | 1.90 | 3.94 | 1.63 | 9.12 | 9.5E-05 |
| Supt3h | suppressor of Ty 3 homolog (S. cerevisiae) | 370.46 | 351.63 | 387.53 | 412.62 | 0.013815 |

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|--------|---|---------|---------|---------|---------|----------|
| Susd3 | sushi domain containing 3 | 13.50 | 12.04 | 16.19 | 35.37 | 0.008674 |
| Taf4b | TAF4B RNA polymerase II, TATA box binding protein (TBP)-ass | 120.33 | 121.48 | 142.37 | 181.11 | 0.000596 |
| Tbkbp1 | TBK1 binding protein 1 | 144.11 | 119.82 | 134.00 | 155.00 | 0.036661 |
| Tff3 | trefoil factor 3, intestinal | 15.09 | 17.48 | 14.45 | 46.46 | 0.002998 |
| Tfrc | transferrin receptor | 2040.15 | 1963.10 | 2157.42 | 2277.81 | 0.010487 |
| Usp7 | ubiquitin specific peptidase 7 | 1599.83 | 1636.72 | 1671.67 | 1918.09 | 0.01381 |
| V1rc22 | vomeronal 1 receptor, C8 | 1.82 | 0.66 | 1.24 | 7.97 | 0.00371 |
| Vldlr | very low density lipoprotein receptor | 1060.61 | 1027.57 | 1019.42 | 1162.25 | 0.026462 |
| Vldlr | very low density lipoprotein receptor | 199.22 | 197.56 | 204.11 | 235.31 | 0.031439 |
| Zw10 | ZW10 homolog (Drosophila), centromere/kinetochore protein | 28.58 | 33.17 | 38.44 | 59.41 | 0.005121 |

Upregulated by Fish Oil

| Symbol | Title | 20mg TO | 5mg TO | Fish Oil | Control | ANOVA |
|----------|--|---------|---------|----------|---------|----------|
| AA617406 | expressed sequence AA617406 | 92.84 | 100.24 | 122.84 | 81.98 | 0.031375 |
| AA881470 | EST AA881470 | 171.53 | 164.98 | 178.22 | 135.55 | 0.036909 |
| Abhd12 | abhydrolase domain containing 12 | 3652.28 | 3549.35 | 3961.17 | 3491.21 | 0.043301 |
| Acta2 | actin, alpha 2, smooth muscle, aorta | 5.59 | 12.65 | 19.40 | 6.73 | 0.00074 |
| Akap3 | A kinase (PRKA) anchor protein 3 | 42.94 | 29.41 | 47.11 | 28.57 | 0.003166 |
| Akap8 | A kinase (PRKA) anchor protein 8 | 1454.08 | 1499.55 | 1541.80 | 1381.38 | 0.026926 |
| Aph1a | anterior pharynx defective 1a homolog (C. elegans) | 366.47 | 411.62 | 506.33 | 372.99 | 0.007577 |
| Arhgap24 | Rho GTPase activating protein 24 | 170.09 | 182.55 | 206.67 | 171.57 | 0.008594 |
| Arhgap25 | Rho GTPase activating protein 25 | 39.99 | 30.34 | 49.78 | 18.93 | 0.003954 |
| AU015263 | expressed sequence AU015263 | 17.37 | 12.02 | 40.78 | 13.78 | 0.012821 |
| AU023617 | expressed sequence AU023617 | 53.05 | 51.12 | 64.14 | 49.60 | 0.030806 |
| AU024076 | expressed sequence AU024076 | 2.01 | 3.74 | 14.88 | 2.20 | 0.002108 |
| AW048948 | expressed sequence AW048948 | 2166.23 | 2054.52 | 2168.48 | 1921.93 | 0.027889 |
| BC020002 | cDNA sequence BC020002 | 317.88 | 296.54 | 447.89 | 317.50 | 0.003015 |
| BC030307 | cDNA sequence BC030307 | 18.00 | 19.20 | 26.09 | 10.93 | 0.03365 |

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|-------------|--|----------|----------|----------|----------|----------|
| BC038286 | cDNA sequence BC038286 | 2224.68 | 2162.00 | 2310.27 | 2164.08 | 0.021676 |
| Bcas1 | breast carcinoma amplified sequence 1 | 36.68 | 30.64 | 39.60 | 20.22 | 0.039711 |
| Bcl2 | B-cell leukemia/lymphoma 2 | 179.19 | 162.51 | 184.02 | 139.81 | 0.014421 |
| C1qtnf3 | C1q and tumor necrosis factor related protein 3 | 8.73 | 9.30 | 17.63 | 4.24 | 0.025324 |
| Cacng2 | calcium channel, voltage-dependent, gamma subunit 2 | 850.41 | 842.72 | 913.30 | 830.47 | 0.043143 |
| Capn3 | calpain 3 | 429.66 | 367.02 | 540.16 | 422.24 | 0.001295 |
| Cd300d | Cd300D antigen | 130.46 | 110.21 | 138.96 | 100.18 | 0.025282 |
| Cdh4 | cadherin 4 | 217.52 | 214.31 | 250.03 | 199.70 | 0.007088 |
| Cenpo | centromere protein O | 14.46 | 6.93 | 18.74 | 4.56 | 0.002517 |
| Chd3 | chromodomain helicase DNA binding protein 3 | 4088.37 | 3909.09 | 4281.48 | 3689.85 | 0.007351 |
| Chst11 | carbohydrate sulfotransferase 11 | 1514.45 | 1583.55 | 1665.15 | 1511.57 | 0.019617 |
| Ctsc | cathepsin C | 561.57 | 707.70 | 787.37 | 549.20 | 0.013545 |
| Cxcl15 | chemokine (C-X-C motif) ligand 15 | 21.48 | 23.79 | 39.34 | 11.16 | 0.002024 |
| Cxcr6 | chemokine (C-X-C motif) receptor 6 | 1.94 | 1.50 | 5.96 | 0.65 | 0.014081 |
| D10Ertd641e | DNA segment, Chr 10, ERATO Doi 641, expressed | 2034.21 | 1934.64 | 2021.23 | 1853.21 | 0.012932 |
| D1Ertd75e | DNA segment, Chr 1, ERATO Doi 75, expressed | 144.83 | 140.67 | 164.39 | 124.84 | 0.021728 |
| D2Ertd63e | DNA segment, Chr 2, ERATO Doi 63, expressed | 32.44 | 60.76 | 51.52 | 28.56 | 0.001697 |
| Dbnnd2 | Dysbindin (dystrobrevin binding protein 1) domain containing | 497.10 | 467.22 | 644.39 | 480.84 | 0.017255 |
| Dbnnd2 | dysbindin (dystrobrevin binding protein 1) domain containing | 430.41 | 392.33 | 513.48 | 349.69 | 0.040724 |
| Ddx3y | DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, Y-linked | 6.42 | 10.45 | 15.05 | 4.71 | 0.003994 |
| Dhx9 | DEAH (Asp-Glu-Ala-His) box polypeptide 9 | 3067.02 | 3004.67 | 3130.23 | 2931.06 | 0.048122 |
| Dph1 | DPH1 homolog (<i>S. cerevisiae</i>) | 323.01 | 321.96 | 378.19 | 329.86 | 0.003389 |
| Ebi2 | Epstein-Barr virus induced gene 2 | 52.30 | 59.89 | 82.38 | 51.33 | 0.026873 |
| Eef1g | eukaryotic translation elongation factor 1 gamma | 7394.58 | 6915.82 | 7704.39 | 6846.35 | 0.020023 |
| EG544973 | H3 histone, family 3A | 12386.80 | 12042.10 | 13207.50 | 11638.13 | 0.033208 |
| EG637227 | immunoglobulin kappa chain variable 28 (V28) | 1.79 | 2.77 | 6.84 | 1.14 | 0.01701 |
| EG665937 | ferritin light chain 1 | 3566.08 | 3688.98 | 3928.81 | 3484.80 | 0.01347 |
| Eif5 | eukaryotic translation initiation factor 5 | 4608.21 | 4522.95 | 4936.78 | 4603.17 | 0.007039 |
| Elf2 | E74-like factor 2 | 6.56 | 22.55 | 33.68 | 13.32 | 1.59E-05 |

| | | | | | | |
|--------------|---|---------|---------|---------|---------|----------|
| Epm2a | epilepsy, progressive myoclonic epilepsy, type 2 gene alpha | 152.78 | 157.36 | 179.60 | 141.13 | 0.031474 |
| Epsti1 | Epithelial stromal interaction 1 (breast) | 6.03 | 6.42 | 25.46 | 10.78 | 0.000275 |
| Fabp7 | fatty acid binding protein 7, brain | 2136.95 | 1675.12 | 1757.66 | 1347.31 | 0.000178 |
| Farp1 | FERM, RhoGEF (Arhgef) and pleckstrin domain protein 1 (chor | 1005.86 | 1041.08 | 1189.92 | 1016.82 | 0.00588 |
| Fcer1g | Fc receptor, IgE, high affinity I, gamma polypeptide | 311.81 | 312.82 | 369.03 | 277.85 | 0.028814 |
| Galnt4 | UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgal | 54.91 | 54.37 | 61.15 | 42.16 | 0.037833 |
| Gcnt1 | glucosaminyl (N-acetyl) transferase 1, core 2 | 37.11 | 44.29 | 64.04 | 33.11 | 0.019464 |
| Gcnt2 | glucosaminyl (N-acetyl) transferase 2, I-branching enzyme | 4.26 | 4.47 | 18.56 | 3.54 | 0.005267 |
| Glb1l | galactosidase, beta 1-like | 50.45 | 65.40 | 75.28 | 34.13 | 0.041989 |
| Gnao1 | guanine nucleotide binding protein, alpha o | 5521.49 | 5358.27 | 5883.90 | 5325.33 | 0.023701 |
| Golga1 | golgi autoantigen, golgin subfamily a, 1 | 525.85 | 526.23 | 559.96 | 476.64 | 0.045213 |
| Gpr174 | G protein-coupled receptor 174 | 14.96 | 17.82 | 23.08 | 12.99 | 0.049217 |
| Gusb | glucuronidase, beta | 213.94 | 240.28 | 271.43 | 224.75 | 0.000734 |
| H13 | histocompatibility 13 | 105.41 | 93.17 | 108.30 | 70.45 | 0.031249 |
| Helz | helicase with zinc finger domain | 1414.94 | 1358.87 | 1419.47 | 1203.02 | 0.015606 |
| Hhip | Hedgehog-interacting protein | 115.14 | 135.07 | 161.25 | 132.47 | 0.001878 |
| Hspb1 | heat shock protein 1 | 344.79 | 453.31 | 476.36 | 269.77 | 0.032689 |
| Hydin | hydrocephalus inducing | 62.47 | 62.79 | 72.14 | 37.24 | 0.030504 |
| Ikzf1 | IKAROS family zinc finger 1 | 141.66 | 117.60 | 170.69 | 122.81 | 0.014262 |
| Il1rl2 | interleukin 1 receptor-like 2 | 14.25 | 18.15 | 40.74 | 22.10 | 0.001281 |
| Inpp1 | inositol polyphosphate-1-phosphatase | 618.14 | 628.69 | 674.26 | 624.01 | 0.009704 |
| Kcni2 | Kv channel-interacting protein 2 | 4025.16 | 3614.22 | 3936.97 | 3365.86 | 0.007364 |
| Kcni3 | Kv channel interacting protein 3, calsenilin | 450.61 | 400.52 | 482.35 | 395.25 | 0.008998 |
| Kif23 | kinesin family member 23 | 13.83 | 12.04 | 33.93 | 13.14 | 0.002686 |
| Lcmt2 | leucine carboxyl methyltransferase 2 | 213.88 | 199.40 | 278.57 | 211.91 | 0.006408 |
| LOC100044313 | reproductive homeobox 4B | 16.55 | 10.22 | 34.70 | 8.87 | 0.025879 |
| LOC100045856 | Sad1 and UNC84 domain containing 1 | 10.20 | 11.88 | 20.38 | 7.36 | 0.022841 |
| LOC100046241 | tousled-like kinase 1 | 145.53 | 167.25 | 187.11 | 128.61 | 0.035419 |
| LOC100048307 | solute carrier family 35, member F2 | 51.18 | 47.01 | 51.16 | 33.50 | 0.006953 |

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|--------------|--|---------|---------|---------|---------|----------|
| LOC100048526 | neuralized-like homolog (Drosophila) | 343.48 | 292.75 | 373.74 | 267.16 | 0.022526 |
| Mapre1 | microtubule-associated protein, RP/EB family, member 1 | 1733.82 | 1762.88 | 1899.40 | 1715.52 | 0.017693 |
| Mfap1a | microfibrillar-associated protein 1A | 909.80 | 627.84 | 1042.34 | 731.18 | 0.003352 |
| Mif | macrophage migration inhibitory factor | 5.70 | 12.00 | 18.46 | 5.42 | 0.027855 |
| Mmd2 | monocyte to macrophage differentiation-associated 2 | 139.42 | 128.17 | 161.24 | 89.47 | 0.018628 |
| Mrpl35 | mitochondrial ribosomal protein L35 | 92.50 | 95.40 | 115.93 | 88.40 | 0.044795 |
| Msi2 | Musashi homolog 2 (Drosophila) | 1144.88 | 1209.55 | 1320.96 | 1053.52 | 0.032849 |
| Myf5 | myogenic factor 5 | 1.78 | 2.54 | 8.02 | 0.93 | 9.66E-06 |
| Myo10 | myosin X | 712.36 | 738.92 | 763.91 | 696.76 | 0.009971 |
| Nlrp4e | NLR family, pyrin domain containing 4E | 3.00 | 3.12 | 9.21 | 1.09 | 0.039942 |
| Nup214 | nucleoporin 214 | 630.68 | 647.07 | 669.06 | 604.30 | 0.035501 |
| Nup85 | nucleoporin 85 | 444.42 | 475.15 | 523.45 | 425.51 | 0.013341 |
| Ocl | oculocerebrorenal syndrome of Lowe | 171.01 | 166.51 | 181.02 | 154.16 | 0.051958 |
| Otop2 | otopetrin 2 | 43.89 | 38.05 | 58.37 | 28.61 | 0.051147 |
| P2ry13 | purinergic receptor P2Y, G-protein coupled 13 | 276.01 | 276.07 | 339.20 | 278.02 | 0.008923 |
| Pcdhgc3 | protocadherin gamma subfamily C, 3 | 23.28 | 32.82 | 34.88 | 14.56 | 0.003274 |
| Pkig | protein kinase inhibitor, gamma | 1351.98 | 1273.14 | 1743.40 | 1280.09 | 0.01917 |
| Pkp1 | plakophilin 1 | 10.60 | 17.67 | 42.14 | 13.49 | 0.00521 |
| Pon2 | paraoxonase 2 | 824.91 | 949.26 | 1139.80 | 897.07 | 0.003931 |
| Pou3f4 | POU domain, class 3, transcription factor 4 | 43.69 | 59.99 | 73.26 | 41.08 | 0.00862 |
| Ppap2b | phosphatidic acid phosphatase type 2B | 5579.09 | 5199.03 | 5957.52 | 5192.53 | 0.018021 |
| Ppt1 | Palmitoyl-protein thioesterase 1 | 4.83 | 7.95 | 18.10 | 4.65 | 0.001845 |
| Pramel7 | preferentially expressed antigen in melanoma like 7 | 8.93 | 10.02 | 19.70 | 4.40 | 0.006837 |
| Prkcbp1 | protein kinase C binding protein 1 | 540.05 | 514.03 | 629.61 | 489.97 | 0.003032 |
| Prnd | prion protein dublet | 3.03 | 5.82 | 12.40 | 3.86 | 0.020942 |
| Psm4 | proteasome (prosome, macropain) 26S subunit, non-ATPase, | 110.97 | 91.55 | 125.56 | 67.90 | 0.009592 |
| Pygb | brain glycogen phosphorylase | 2920.06 | 2691.72 | 3159.41 | 2621.31 | 0.017266 |
| Rab27a | RAB27A, member RAS oncogene family | 39.49 | 35.45 | 46.63 | 20.57 | 0.041328 |
| Rassf2 | Ras association (RalGDS/AF-6) domain family 2 | 91.41 | 94.52 | 120.63 | 78.02 | 0.004894 |

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|----------|---|---------|---------|----------|---------|----------|
| Rassf2 | Ras association (RalGDS/AF-6) domain family 2 | 42.28 | 40.38 | 65.99 | 19.60 | 0.049224 |
| Reep5 | receptor accessory protein 5 | 6571.47 | 6305.44 | 6808.95 | 6131.98 | 0.038928 |
| Rfk | riboflavin kinase | 1569.59 | 1603.48 | 1788.89 | 1567.67 | 0.028018 |
| Rims2 | regulating synaptic membrane exocytosis 2 | 12.02 | 9.83 | 17.24 | 5.84 | 0.049947 |
| Scrg1 | scrapie responsive gene 1 | 1332.40 | 1390.57 | 1501.98 | 1256.46 | 0.021966 |
| Serinc3 | serine incorporator 3 | 444.82 | 404.82 | 759.72 | 400.80 | 0.017416 |
| Slc20a1 | solute carrier family 20, member 1 | 2633.47 | 2438.06 | 2640.23 | 2394.96 | 0.014173 |
| Slc23a1 | solute carrier family 23 (nucleobase transporters), member 1 | 4.03 | 7.25 | 14.21 | 2.75 | 0.04545 |
| Slc43a3 | solute carrier family 43, member 3 | 20.51 | 23.14 | 32.57 | 9.86 | 0.03239 |
| Slc46a2 | solute carrier family 46, member 2 | 3.04 | 4.87 | 11.37 | 2.67 | 0.030589 |
| Smpd4 | sphingomyelin phosphodiesterase 4 | 473.28 | 453.90 | 474.72 | 427.50 | 0.029072 |
| Snx5 | sorting nexin 5 | 701.61 | 720.63 | 984.51 | 640.30 | 0.021379 |
| Spag16 | sperm associated antigen 16 | 24.54 | 48.61 | 63.40 | 33.91 | 0.000222 |
| Spcs1 | signal peptidase complex subunit 1 homolog (<i>S. cerevisiae</i>) | 74.70 | 71.79 | 89.28 | 66.29 | 0.019237 |
| Spp2 | Secreted phosphoprotein 2 | 3.13 | 3.57 | 14.76 | 2.49 | 0.00046 |
| Tars | threonyl-tRNA synthetase | 618.17 | 627.48 | 640.26 | 561.58 | 0.020548 |
| Tbcel | tubulin folding cofactor E-like | 1177.87 | 1223.75 | 1302.47 | 1151.76 | 0.024695 |
| Tcrb-V13 | T-cell receptor beta, variable 13 | 1.24 | 7.66 | 17.21 | 4.28 | 0.000206 |
| Tlr3 | toll-like receptor 3 | 255.03 | 230.52 | 269.05 | 207.81 | 0.036394 |
| Tmem80 | transmembrane protein 80 | 461.10 | 477.15 | 515.91 | 462.53 | 0.029541 |
| Tnfsf4 | tumor necrosis factor (ligand) superfamily, member 4 | 36.12 | 26.95 | 66.68 | 22.14 | 0.022045 |
| Tnpo2 | transportin 2 (importin 3, karyopherin beta 2b) | 434.17 | 413.74 | 473.77 | 386.17 | 0.041983 |
| Tnpo3 | transportin 3 | 867.23 | 867.45 | 877.87 | 811.46 | 0.031535 |
| V1rd9 | vomer nasal 1 receptor, D9 | 7.64 | 5.62 | 13.16 | 3.40 | 0.030332 |
| Wdr46 | WD repeat domain 46 | 106.77 | 129.66 | 136.25 | 75.28 | 0.006602 |
| Whsc1 | Wolf-Hirschhorn syndrome candidate 1 (human) | 57.73 | 48.68 | 67.11 | 47.40 | 0.030133 |
| Wipf2 | WAS/WASL interacting protein family, member 2 | 1624.25 | 1476.39 | 1688.36 | 1465.44 | 0.018658 |
| Xist | inactive X specific transcripts | 9879.40 | 8691.64 | 11364.30 | 8748.02 | 0.022906 |
| Xkr8 | X Kell blood group precursor related family member 8 homolog | 62.39 | 66.29 | 66.80 | 49.46 | 0.033693 |

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|--------|--|---------|---------|---------|---------|----------|
| Zap70 | zeta-chain (TCR) associated protein kinase | 236.72 | 304.73 | 558.48 | 137.42 | 0.053866 |
| Zbtb20 | zinc finger and BTB domain containing 20 | 2367.70 | 2150.44 | 2526.66 | 2153.26 | 0.017413 |

Downregulated by Fish Oil

| Symbol | Title | 20mg TO | 5mg TO | Fish Oil | Control | ANOVA |
|----------|---|---------|---------|----------|---------|----------|
| Adra2a | adrenergic receptor, alpha 2a | 58.10 | 59.04 | 39.00 | 62.06 | 0.021971 |
| AL022943 | expressed sequence AL022943 | 7.21 | 6.79 | 6.44 | 12.62 | 0.028319 |
| Alkbh4 | alkB, alkylation repair homolog 4 (E. coli) | 176.18 | 163.70 | 169.41 | 198.39 | 0.013987 |
| Arrdc2 | arrestin domain containing 2 | 141.71 | 150.60 | 103.34 | 155.59 | 0.014001 |
| Aspm | asp (abnormal spindle)-like, microcephaly associated (Drosop | 14.52 | 7.58 | 5.53 | 24.38 | 0.014873 |
| Atp6v1b2 | ATPase, H+ transporting, lysosomal V1 subunit B2 | 3765.88 | 3981.90 | 3615.73 | 4114.56 | 0.038246 |
| Axin2 | axin2 | 102.29 | 113.05 | 98.65 | 116.94 | 0.029786 |
| Bag2 | Bcl2-associated athanogene 2 | 294.08 | 312.99 | 267.99 | 328.59 | 0.043358 |
| BB031773 | expressed sequence BB031773 | 2.43 | 1.73 | 3.69 | 10.58 | 0.00362 |
| BB045044 | expressed sequence BB045044 | 118.43 | 125.81 | 48.63 | 128.34 | 0.023992 |
| BC016495 | cDNA sequence BC016495 | 100.33 | 120.87 | 56.97 | 111.64 | 0.015393 |
| Bmpr1a | Bone morphogenetic protein receptor, type 1A | 14.08 | 27.26 | 14.69 | 35.78 | 0.002963 |
| Bmyc | brain expressed myelocytomatosis oncogene | 1716.62 | 1549.46 | 1539.08 | 1641.11 | 0.000131 |
| Brf2 | BRF2, subunit of RNA polymerase III transcription initiation fa | 480.46 | 468.41 | 433.07 | 505.20 | 0.000267 |
| C79130 | expressed sequence C79130 | 16.08 | 9.31 | 4.77 | 19.10 | 0.017518 |
| C81269 | expressed sequence C81269 | 27.70 | 37.53 | 14.94 | 49.20 | 0.044965 |
| Calcr1 | Calcitonin receptor-like | 14.49 | 5.87 | 2.68 | 26.50 | 0.019133 |
| Casp3 | caspase 3 | 83.16 | 82.77 | 64.64 | 89.48 | 0.028298 |
| Ccdc43 | coiled-coil domain containing 43 | 602.57 | 584.24 | 488.56 | 604.64 | 0.003981 |
| Ccl20 | chemokine (C-C motif) ligand 20 | 2.95 | 2.71 | 2.46 | 3.83 | 0.041184 |
| Cend1 | cell cycle exit and neuronal differentiation 1 | 2921.28 | 3033.60 | 2824.61 | 3201.73 | 0.048851 |
| Cpz | carboxypeptidase Z | 3.34 | 2.28 | 2.08 | 4.86 | 0.000141 |
| Dbnl | drebrin-like | 848.86 | 839.46 | 836.00 | 926.98 | 0.028199 |

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|----------|--|---------|---------|---------|---------|----------|
| Dclk2 | doublecortin-like kinase 2 | 13.31 | 16.91 | 15.03 | 27.17 | 0.010952 |
| Dctd | dCMP deaminase | 151.34 | 161.35 | 131.79 | 183.37 | 0.05207 |
| Dcun1d2 | DCN1, defective in cullin neddylation 1, domain containing 2 (| 879.62 | 881.32 | 810.96 | 879.24 | 0.000644 |
| Depdc7 | DEP domain containing 7 | 123.10 | 150.97 | 116.88 | 153.73 | 0.009411 |
| Dld | dihydrolipoamide dehydrogenase | 1787.06 | 1825.17 | 1785.26 | 1932.60 | 0.017525 |
| Dlx6os1 | Dlx6 opposite strand transcript 1 | 318.13 | 339.13 | 262.33 | 331.65 | 0.019949 |
| Dok5 | docking protein 5 | 82.48 | 87.05 | 70.18 | 104.83 | 0.044588 |
| Dusp6 | dual specificity phosphatase 6 | 1906.50 | 1854.11 | 1643.39 | 2052.71 | 0.025261 |
| EG436523 | protease, serine, 3 | 4.14 | 2.41 | 5.51 | 12.91 | 0.002239 |
| EG666827 | predicted gene, EG666827 | 9.40 | 10.72 | 8.80 | 25.32 | 0.023432 |
| Eid1 | EP300 interacting inhibitor of differentiation 1 | 3029.43 | 2899.24 | 2837.98 | 3115.79 | 0.03969 |
| Elov14 | elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo | 1418.22 | 1486.67 | 1345.88 | 1562.27 | 0.031834 |
| Eml2 | echinoderm microtubule associated protein like 2 | 1625.77 | 1557.24 | 1439.15 | 1634.99 | 0.006135 |
| Eny2 | enhancer of yellow 2 homolog (Drosophila) | 304.04 | 346.26 | 331.07 | 398.33 | 0.000808 |
| Epb4.112 | erythrocyte protein band 4.1-like 2 | 311.39 | 303.81 | 279.01 | 332.19 | 0.050777 |
| Fbxl14 | F-box and leucine-rich repeat protein 14 | 390.58 | 414.90 | 331.25 | 410.16 | 0.022071 |
| Fbxo3 | F-box protein 3 | 86.04 | 99.07 | 79.27 | 106.51 | 0.034706 |
| Flcn | Folliculin | 816.98 | 823.17 | 714.69 | 856.18 | 0.039128 |
| Flrt1 | fibronectin leucine rich transmembrane protein 3 | 122.29 | 120.69 | 115.69 | 157.13 | 0.025822 |
| Fos | FBJ osteosarcoma oncogene | 1405.08 | 1080.29 | 677.59 | 1241.60 | 0.010032 |
| Fzd8 | frizzled homolog 8 (Drosophila) | 27.23 | 39.46 | 34.17 | 52.15 | 0.006054 |
| Galnt13 | UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgal | 133.21 | 119.29 | 123.66 | 166.72 | 0.010765 |
| Gart | phosphoribosylglycinamide formyltransferase | 321.60 | 328.19 | 311.81 | 361.35 | 0.053681 |
| Gatad2a | GATA zinc finger domain containing 2A | 115.06 | 115.36 | 100.73 | 131.62 | 0.036202 |
| Gckr | glucokinase regulatory protein | 10.64 | 16.84 | 7.96 | 22.80 | 0.025411 |
| Gne | glucosamine | 403.92 | 436.32 | 370.33 | 436.11 | 0.019609 |
| Hbp1 | high mobility group box transcription factor 1 | 1297.80 | 1251.25 | 1190.49 | 1313.90 | 0.024907 |
| Hivep2 | human immunodeficiency virus type I enhancer binding prote | 1931.34 | 1849.78 | 1757.28 | 1956.16 | 0.02464 |
| Hmgb3 | high mobility group box 3 | 756.79 | 853.66 | 766.84 | 830.31 | 0.000331 |

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|--------------|---|---------|---------|---------|---------|----------|
| Ift52 | intraflagellar transport 52 homolog (Chlamydomonas) | 644.03 | 611.40 | 542.22 | 662.05 | 0.017604 |
| Il16 | interleukin 16 | 42.99 | 53.54 | 31.14 | 57.48 | 0.025479 |
| Insig1 | insulin induced gene 1 | 671.93 | 694.39 | 664.50 | 784.10 | 0.033627 |
| Kcnh7 | potassium voltage-gated channel, subfamily H (eag-related), r | 123.88 | 103.24 | 88.16 | 142.05 | 0.050073 |
| Kctd1 | potassium channel tetramerisation domain containing 1 | 948.26 | 929.97 | 866.23 | 953.47 | 0.009126 |
| Lars | leucyl-tRNA synthetase | 1307.56 | 1217.24 | 1160.33 | 1353.31 | 0.018304 |
| Lats2 | large tumor suppressor 2 | 31.22 | 21.05 | 19.35 | 36.02 | 0.018876 |
| LOC100048066 | THUMP domain containing 1 | 1001.73 | 1007.77 | 941.51 | 1078.42 | 0.007578 |
| LOC620016 | thioredoxin-like 2 | 39.66 | 62.31 | 37.95 | 67.35 | 0.009838 |
| LOC632073 | cDNA sequence U46068 | 16.04 | 22.16 | 6.85 | 26.49 | 0.013487 |
| Lonrf2 | LON peptidase N-terminal domain and ring finger 2 | 2871.53 | 2730.28 | 2409.44 | 2923.69 | 0.024851 |
| Lrrc61 | leucine rich repeat containing 61 | 393.82 | 392.40 | 337.29 | 384.21 | 0.004495 |
| Lrrc8a | leucine rich repeat containing 8A | 695.53 | 740.60 | 701.89 | 817.44 | 0.000236 |
| Lrrtm4 | leucine rich repeat transmembrane neuronal 4 | 367.73 | 342.94 | 325.23 | 409.89 | 0.002507 |
| Mbd2 | methyl-CpG binding domain protein 2 | 858.88 | 933.25 | 810.62 | 926.69 | 0.002143 |
| Mecr | mitochondrial trans-2-enoyl-CoA reductase | 298.17 | 320.19 | 283.35 | 317.02 | 0.01388 |
| Med14 | mediator complex subunit 14 | 188.75 | 161.03 | 152.10 | 206.51 | 0.022701 |
| Mmp15 | matrix metalloproteinase 15 | 63.57 | 78.67 | 59.26 | 80.84 | 0.01858 |
| Mpzl1 | myelin protein zero-like 1 | 203.85 | 233.96 | 214.28 | 289.89 | 0.01312 |
| Mtmr2 | myotubularin related protein 2 | 357.20 | 373.44 | 344.84 | 406.17 | 0.049492 |
| Myo5a | myosin Va | 2286.99 | 2395.08 | 2153.30 | 2467.04 | 0.036056 |
| Ndufs4 | NADH dehydrogenase (ubiquinone) Fe-S protein 4 | 23.52 | 24.09 | 13.36 | 23.68 | 0.021116 |
| Neto2 | neuropilin (NRP) and tolloid (TLL)-like 2 | 139.98 | 142.01 | 110.40 | 140.36 | 0.01598 |
| Nov | nephroblastoma overexpressed gene | 3876.29 | 3826.42 | 3343.02 | 3895.26 | 0.01629 |
| Nov | nephroblastoma overexpressed gene | 3167.17 | 3276.72 | 2956.67 | 3486.83 | 0.029472 |
| Nr4a1 | nuclear receptor subfamily 4, group A, member 1 | 1758.52 | 1851.45 | 1433.71 | 1973.04 | 0.025385 |
| Ntng1 | netrin G1 | 960.07 | 993.81 | 912.39 | 1042.49 | 0.026833 |
| Nxph1 | neurexophilin 1 | 779.28 | 847.37 | 701.48 | 873.53 | 0.010459 |
| Oit1 | oncoprotein induced transcript 1 | 11.57 | 6.91 | 9.32 | 22.72 | 0.012023 |

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|----------|---|---------|---------|---------|---------|----------|
| Pank3 | pantothenate kinase 3 | 182.70 | 193.01 | 168.03 | 203.38 | 0.052709 |
| Parp3 | poly (ADP-ribose) polymerase family, member 3 | 126.45 | 106.92 | 91.04 | 126.98 | 0.014757 |
| Pcdhac1 | protocadherin alpha subfamily C, 1 | 102.19 | 108.51 | 73.06 | 106.41 | 0.020066 |
| Pex2 | peroxin 2 | 2427.85 | 2217.89 | 1937.81 | 2423.54 | 5.09E-05 |
| Pex26 | peroxisome biogenesis factor 26 | 399.91 | 390.13 | 348.89 | 390.38 | 0.002983 |
| Plekha7 | pleckstrin homology domain containing, family A member 7 | 17.45 | 16.31 | 11.93 | 18.53 | 0.012205 |
| Ppargc1a | Peroxisome proliferative activated receptor, gamma, coactivator 1 alpha | 937.44 | 1034.70 | 943.45 | 1125.18 | 0.019328 |
| Ppp2r2b | protein phosphatase 2 (formerly 2A), regulatory subunit B (PPP2R2B) | 2287.76 | 2260.26 | 2172.15 | 2349.43 | 0.045142 |
| Prkcbp1 | protein kinase C binding protein 1 | 416.77 | 453.45 | 317.42 | 455.40 | 0.013132 |
| Psmd9 | proteasome (prosome, macropain) 26S subunit, non-ATPase, 9 | 177.10 | 176.58 | 124.37 | 172.19 | 0.006752 |
| Rab4a | RAB4A, member RAS oncogene family | 1254.76 | 1307.50 | 1237.28 | 1386.54 | 0.04163 |
| Rae1 | RAE1 RNA export 1 homolog (S. pombe) | 1388.73 | 1390.19 | 1269.82 | 1475.17 | 0.044481 |
| Ranbp17 | RAN binding protein 17 | 36.41 | 40.81 | 36.00 | 56.16 | 0.030551 |
| Rbm12 | RNA binding motif protein 12 | 168.42 | 155.29 | 124.93 | 179.78 | 0.037848 |
| Rgs4 | regulator of G-protein signaling 4 | 1256.33 | 1145.42 | 1106.54 | 1275.12 | 0.018134 |
| Ric8 | resistance to inhibitors of cholinesterase 8 homolog (C. elegans) | 73.08 | 63.78 | 48.51 | 77.50 | 0.048275 |
| Rnf122 | ring finger protein 122 | 73.89 | 79.38 | 65.21 | 100.49 | 0.051591 |
| Rp11 | retinitis pigmentosa 1 homolog (human)-like 1 | 6.24 | 10.25 | 3.41 | 13.65 | 0.030801 |
| Sdc4 | syndecan 4 | 1156.83 | 1451.83 | 816.95 | 1485.67 | 0.017041 |
| Sdccag10 | serologically defined colon cancer antigen 10 | 233.55 | 252.95 | 228.69 | 281.03 | 0.011923 |
| Sestd1 | SEC14 and spectrin domains 1 | 356.51 | 371.65 | 318.18 | 395.59 | 0.039481 |
| Shf | Src homology 2 domain containing F | 488.24 | 475.74 | 448.74 | 516.71 | 0.026273 |
| Sla | src-like adaptor | 116.56 | 89.18 | 97.09 | 128.00 | 0.005752 |
| Slc25a17 | solute carrier family 25 (mitochondrial carrier, peroxisomal membrane protein), member 17 | 469.66 | 455.95 | 432.29 | 515.64 | 0.017758 |
| Slc35a2 | solute carrier family 35 (UDP-galactose transporter), member 2 | 530.81 | 591.42 | 523.73 | 584.24 | 0.003809 |
| Smad1 | MAD homolog 1 (Drosophila) | 1192.07 | 1145.02 | 981.33 | 1108.44 | 0.000416 |
| Soat1 | sterol O-acyltransferase 1 | 61.24 | 54.81 | 56.46 | 91.25 | 0.022985 |
| Spata6 | spermatogenesis associated 6 | 1.90 | 3.94 | 1.63 | 9.12 | 9.5E-05 |
| Spred2 | sprouty-related, EVH1 domain containing 2 | 3558.60 | 3444.09 | 3280.20 | 3482.23 | 0.000992 |

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|---------|---|---------|---------|---------|---------|----------|
| Srp14 | signal recognition particle 14 | 5934.39 | 6229.45 | 5606.13 | 6264.62 | 0.010947 |
| Stk17b | serine/threonine kinase 17b (apoptosis-inducing) | 133.28 | 138.77 | 101.96 | 146.47 | 0.022378 |
| Stox2 | storkhead box 2 | 1579.56 | 1306.80 | 939.88 | 1752.42 | 0.034603 |
| Strap | Serine/threonine kinase receptor associated protein | 205.06 | 217.52 | 171.49 | 233.97 | 0.007579 |
| Susd3 | sushi domain containing 3 | 13.50 | 12.04 | 16.19 | 35.37 | 0.008674 |
| Sybl1 | synaptobrevin like 1 | 983.66 | 1018.02 | 869.69 | 1038.69 | 0.036966 |
| Sycp2 | synaptonemal complex protein 2 | 46.32 | 37.07 | 30.71 | 44.26 | 0.002638 |
| Taf4b | TAF4B RNA polymerase II, TATA box binding protein (TBP)-ass | 120.33 | 121.48 | 142.37 | 181.11 | 0.000596 |
| Tbk1 | TANK-binding kinase 1 | 1036.64 | 1097.81 | 978.87 | 1080.25 | 0.008814 |
| Tff3 | trefoil factor 3, intestinal | 15.09 | 17.48 | 14.45 | 46.46 | 0.002998 |
| Tgm3 | transglutaminase 3, E polypeptide | 87.86 | 84.83 | 53.42 | 91.23 | 0.037784 |
| Thap2 | THAP domain containing, apoptosis associated protein 2 | 42.14 | 46.17 | 31.94 | 63.22 | 0.017226 |
| Tinf2 | Terf1 (TRF1)-interacting nuclear factor 2 | 300.38 | 304.78 | 287.24 | 345.47 | 0.012607 |
| Tm2d2 | TM2 domain containing 2 | 231.91 | 240.49 | 198.88 | 258.57 | 0.042207 |
| Tm9sf3 | transmembrane 9 superfamily member 3 | 333.43 | 397.63 | 293.03 | 409.93 | 0.002133 |
| Tm9sf3 | transmembrane 9 superfamily member 3 | 2001.88 | 2116.36 | 2020.17 | 2189.03 | 0.006935 |
| Tmem159 | transmembrane protein 159 | 357.57 | 350.55 | 320.93 | 365.15 | 0.013899 |
| Trim27 | tripartite motif protein 27 | 649.95 | 697.04 | 536.04 | 651.50 | 0.002091 |
| Trip11 | thyroid hormone receptor interactor 11 | 7.19 | 9.94 | 5.60 | 16.48 | 0.042287 |
| Trpc1 | transient receptor potential cation channel, subfamily C, mem | 1237.83 | 1201.80 | 1126.31 | 1246.00 | 0.007073 |
| Trspap1 | tRNA selenocysteine associated protein 1 | 274.14 | 289.32 | 270.77 | 310.85 | 0.026751 |
| Ttc9c | tetratricopeptide repeat domain 9C | 277.70 | 260.07 | 220.60 | 274.99 | 0.027426 |
| Ube1x | ubiquitin-activating enzyme E1, Chr X | 36.12 | 39.24 | 29.80 | 46.67 | 0.05101 |
| Ubl4b | ubiquitin-like 4B | 73.57 | 86.66 | 63.27 | 104.88 | 0.037448 |
| Ugcg | UDP-glucose ceramide glucosyltransferase | 760.97 | 741.96 | 670.52 | 772.26 | 0.009821 |
| V1rc22 | vomer nasal 1 receptor, C8 | 1.82 | 0.66 | 1.24 | 7.97 | 0.00371 |
| V2r16 | vomer nasal 2, receptor, 16 | 27.90 | 19.07 | 6.21 | 24.51 | 0.011597 |
| Vldlr | very low density lipoprotein receptor | 1060.61 | 1027.57 | 1019.42 | 1162.25 | 0.026462 |
| Vps11 | vacuolar protein sorting 11 (yeast) | 614.74 | 646.49 | 635.11 | 717.46 | 0.009517 |

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|---------|--|--------|--------|--------|--------|----------|
| Wdr17 | WD repeat domain 17 | 555.27 | 546.06 | 441.14 | 616.81 | 0.005647 |
| Zdhhc2 | zinc finger, DHHC domain containing 2 | 359.40 | 295.97 | 257.98 | 379.78 | 0.030339 |
| Zdhhc2 | zinc finger, DHHC domain containing 2 | 345.25 | 323.70 | 281.40 | 368.68 | 0.04812 |
| Zfp64 | zinc finger protein 64 | 216.00 | 218.65 | 197.07 | 258.39 | 0.017 |
| Zfyve28 | zinc finger, FYVE domain containing 28 | 533.34 | 513.91 | 465.02 | 537.50 | 0.009925 |