|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Supplementary Table S1 | | | | | |
| id | log2FC(OA/Control) | pval | fdr | regulate | significant |
| 1:102979382|102989571 | -7.0146886 | 9.33E-11 | 1.13E-06 | down | yes |
| 17:27765535|27766588 | -7.2095933 | 2.94E-10 | 1.78E-06 | down | yes |
| 19:6702127|6702579 | -5.7256104 | 3.17E-08 | 0.00012766 | down | yes |
| 5:59180595|59215968 | -5.2760784 | 1.18E-07 | 0.00035593 | down | yes |
| 8:17558295|17562110 | -5.830035 | 7.60E-07 | 0.00183471 | down | yes |
| 7:90747681|90790652 | -4.4750758 | 3.16E-06 | 0.00636129 | down | yes |
| 4:88475841|88479507 | -4.5431287 | 4.12E-06 | 0.00710284 | down | yes |
| 13:75713182|75727098 | 4.06243391 | 4.95E-06 | 0.00748029 | up | yes |
| 17:27778690|27779056 | -4.2259783 | 1.16E-05 | 0.01510205 | down | yes |
| 4:150467673|150491035 | -4.2555494 | 1.27E-05 | 0.01510205 | down | yes |
| 8:17543318|17543715 | -4.576294 | 1.42E-05 | 0.01510205 | down | yes |
| 10:115120185|115129535 | 3.52956202 | 1.50E-05 | 0.01510205 | up | yes |
| 5:65170617|65215487 | -3.9400185 | 6.71E-05 | 0.06130968 | down | yes |
| 8:41661430|41661941 | 3.31749642 | 7.68E-05 | 0.06130968 | up | yes |
| 1:247159006|247159813 | 5.42175065 | 8.25E-05 | 0.06130968 | up | yes |
| 20:54157169|54171670 | -4.2436025 | 8.27E-05 | 0.06130968 | down | yes |
| 1:46077515|46080750 | -3.9505609 | 8.63E-05 | 0.06130968 | down | yes |
| 2:223912253|223918010 | -4.0531467 | 0.00013432 | 0.0878503 | down | yes |
| 15:83923904|83970637 | -3.7749837 | 0.0001382 | 0.0878503 | down | yes |
| 17:27768977|27769584 | -5.1367225 | 0.0001862 | 0.11244761 | down | yes |
| 19:6697344|6697794 | -3.5244413 | 0.00030733 | 0.17675827 | down | yes |
| 7:84110470|84194668 | -4.3614667 | 0.00034832 | 0.19122922 | down | yes |
| 20:45815541|45815913 | -3.6184204 | 0.00038076 | 0.1999479 | down | yes |
| 7:84129123|84194668 | -4.4164234 | 0.00040484 | 0.20373628 | down | yes |
| 1:246591512|246591941 | 3.25903817 | 0.00043672 | 0.21098767 | up | yes |
| 19:48845370|48852326 | -3.44724 | 0.00059645 | 0.2705299 | down | yes |
| 6:159682474|159688242 | -3.2773535 | 0.00060476 | 0.2705299 | down | yes |
| 21:41432050|41437152 | -3.5076824 | 0.00084407 | 0.36409636 | down | yes |
| 12:100204940|100205744 | -3.4815857 | 0.0009696 | 0.37359312 | down | yes |
| 7:84046324|84110589 | -3.4648439 | 0.00097324 | 0.37359312 | down | yes |
| 2:72674532|72733118 | 4.56218595 | 0.00098611 | 0.37359312 | up | yes |
| 1:93305388|93325895 | -3.4219483 | 0.00098981 | 0.37359312 | down | yes |
| 1:27668226|27669346 | -3.85047 | 0.00106467 | 0.38966852 | down | yes |
| 1:23071225|23072197 | 3.52357915 | 0.00111472 | 0.39598924 | up | yes |
| 15:45476079|45476552 | -3.9598305 | 0.00122753 | 0.42360477 | down | yes |
| 12:27650010|27656730 | -3.3147103 | 0.00128896 | 0.42516483 | down | yes |
| 17:66513336|66514466 | -4.3901789 | 0.00130246 | 0.42516483 | down | yes |
| 5:138424075|138425582 | -3.355593 | 0.00142197 | 0.4519615 | down | yes |
| 22:33761371|33765953 | -4.1946536 | 0.00159529 | 0.47739629 | down | yes |
| 12:100204940|100205757 | -3.3785056 | 0.00159788 | 0.47739629 | down | yes |
| 5:38971877|38978650 | -3.191256 | 0.00162057 | 0.47739629 | down | yes |
| 3:10226371|10239039 | -3.2309863 | 0.00166474 | 0.47873048 | down | yes |
| 6:168543625|168608239 | 4.56983277 | 0.00170875 | 0.4799612 | up | yes |
| 21:36338779|36344707 | 4.11644082 | 0.00199654 | 0.54804915 | up | yes |
| 20:18297985|18306393 | -4.6873711 | 0.00214476 | 0.57565226 | down | yes |
| 11:63895159|63895633 | 2.51804111 | 0.00221361 | 0.58121793 | up | yes |
| 17:80287815|80291827 | -3.0144506 | 0.00280045 | 0.71965506 | down | yes |
| 7:84110470|84134951 | -3.4826538 | 0.00296286 | 0.73284844 | down | yes |
| 20:25496663|25498346 | 2.04618052 | 0.00300782 | 0.73284844 | up | yes |
| 11:92352096|92355404 | 4.16268873 | 0.00303382 | 0.73284844 | up | yes |
| 11:78119182|78121174 | 3.15142761 | 0.00315668 | 0.73805944 | up | yes |
| 1:236859833|236863554 | -3.1032671 | 0.00317903 | 0.73805944 | down | yes |
| 12:121023990|121027817 | -3.0764678 | 0.00326587 | 0.73805944 | down | yes |
| 4:102304317|102315830 | -3.8014826 | 0.00336046 | 0.73805944 | down | yes |
| 9:84702159|84710791 | 2.86567306 | 0.00336093 | 0.73805944 | up | yes |
| 18:6263947|6312056 | -3.4977975 | 0.00378226 | 0.80234344 | down | yes |
| 3:112109543|112113145 | -3.3472394 | 0.00378652 | 0.80234344 | down | yes |
| 7:72890627|72891110 | -3.6844846 | 0.00398994 | 0.83086978 | down | yes |
| 1:32944019|32949774 | -2.9216687 | 0.00524299 | 1 | down | yes |
| 11:125235045|125239728 | -3.3103606 | 0.00537553 | 1 | down | yes |
| 9:33935839|33941862 | -3.5440215 | 0.00559316 | 1 | down | yes |
| 22:33761371|33856802 | -3.727331 | 0.0056138 | 1 | down | yes |
| 11:16183886|16234671 | -2.8317215 | 0.00570934 | 1 | down | yes |
| 4:186706563|186709845 | 4.04786425 | 0.00589761 | 1 | up | yes |
| 3:125277726|125331238 | 3.80512692 | 0.0061645 | 1 | up | yes |
| 4:102304317|102315742 | -2.9703422 | 0.00619047 | 1 | down | yes |
| 17:80325030|80328477 | -3.013455 | 0.00630213 | 1 | down | yes |
| 19:45022053|45028992 | -3.2840934 | 0.00675664 | 1 | down | yes |
| 16:58560212|58560362 | 3.91773309 | 0.00679791 | 1 | up | yes |
| 4:106295094|106308989 | -2.8955174 | 0.00705903 | 1 | down | yes |
| 10:32805015|32824604 | 2.47034385 | 0.00779452 | 1 | up | yes |
| 12:121027576|121027817 | -2.8648954 | 0.00811642 | 1 | down | yes |
| 20:35069296|35078174 | -2.730087 | 0.00862442 | 1 | down | yes |
| 7:98228014|98229166 | 3.61267813 | 0.00873229 | 1 | up | yes |
| 1:186893011|186911389 | -3.1066736 | 0.00897813 | 1 | down | yes |
| 20:38040435|38066256 | 2.91024396 | 0.00929394 | 1 | up | yes |
| 2:241030284|241030571 | 2.3421537 | 0.00954736 | 1 | up | yes |
| 5:175492095|175492267 | 3.5921128 | 0.00962401 | 1 | up | yes |
| 13:42953948|42970670 | -2.9075567 | 0.00963706 | 1 | down | yes |
| 15:72695177|72716850 | -2.8364617 | 0.00965302 | 1 | down | yes |
| 5:65260600|65300131 | -2.7507601 | 0.00967631 | 1 | down | yes |
| 9:120536372|120539164 | 2.2484411 | 0.00992009 | 1 | up | yes |
| 17:80306252|80306468 | -2.7923131 | 0.01004225 | 1 | down | yes |
| 12:23604387|23741039 | -2.7154978 | 0.01020717 | 1 | down | yes |
| 7:80789306|80800826 | -2.8798374 | 0.01077985 | 1 | down | yes |
| 5:72877228|72883232 | 2.0345252 | 0.01078439 | 1 | up | yes |
| 17:1480527|1480885 | 1.65920685 | 0.01114306 | 1 | up | yes |
| 12:25995037|26003450 | -3.4698886 | 0.01185674 | 1 | down | yes |
| 13:42917541|42970670 | -3.0941484 | 0.01194371 | 1 | down | yes |
| 1:21861757|21862115 | 1.9291177 | 0.01207133 | 1 | up | yes |
| 3:100841998|100848875 | -2.6548355 | 0.01233469 | 1 | down | yes |
| 6:168509915|168608239 | 3.54082201 | 0.01235108 | 1 | up | yes |
| 11:125602303|125604247 | -2.6103884 | 0.01252699 | 1 | down | yes |
| 7:84046324|84060558 | -4.0256687 | 0.0126723 | 1 | down | yes |
| 7:157366502|157367483 | 2.1840816 | 0.01295983 | 1 | up | yes |
| 2:223991803|224001922 | -2.3340353 | 0.01316184 | 1 | down | yes |
| 5:139614586|139623461 | -2.6963238 | 0.0134045 | 1 | down | yes |
| 1:65913245|65918835 | -2.298018 | 0.01342013 | 1 | down | yes |
| 19:45011936|45012276 | -2.5997947 | 0.01370568 | 1 | down | yes |
| 5:618990|620261 | -2.7551739 | 0.0139525 | 1 | down | yes |
| 2:237347807|237353403 | 3.37387478 | 0.01416384 | 1 | up | yes |
| 11:74118228|74118382 | -2.7478754 | 0.01430979 | 1 | down | yes |
| 19:45025329|45025737 | -2.6678942 | 0.0143445 | 1 | down | yes |
| 1:10403071|10404279 | 2.33188823 | 0.0146809 | 1 | up | yes |
| 7:90726567|90863269 | -2.5316566 | 0.01468444 | 1 | down | yes |
| 5:65170617|65197151 | -4.1541297 | 0.01529692 | 1 | down | yes |
| 10:26934413|26935627 | -3.0092422 | 0.01538201 | 1 | down | yes |
| 18:54277703|54287411 | 3.36487091 | 0.01564169 | 1 | up | yes |
| 20:64022757|64026058 | 2.15899955 | 0.01569604 | 1 | up | yes |
| 12:23563258|23575838 | -2.7800811 | 0.01604729 | 1 | down | yes |
| 5:32724698|32739030 | 2.31448473 | 0.01628771 | 1 | up | yes |
| 4:88475841|88494331 | -2.9231002 | 0.01870983 | 1 | down | yes |
| 10:74589282|74600493 | -2.8672356 | 0.01990161 | 1 | down | yes |
| 3:119843255|119876508 | -2.4410486 | 0.02001182 | 1 | down | yes |
| 9:91756071|91775818 | -2.5418219 | 0.02001683 | 1 | down | yes |
| 22:38521608|38568289 | 3.30156947 | 0.02035607 | 1 | up | yes |
| 11:74132844|74133557 | -2.6353688 | 0.02039675 | 1 | down | yes |
| 12:108652272|108701323 | 1.8429984 | 0.02096415 | 1 | up | yes |
| 11:10478526|10482225 | -2.422298 | 0.02110549 | 1 | down | yes |
| 14:34783762|34792921 | -2.4453936 | 0.0213266 | 1 | down | yes |
| 10:92180963|92192636 | -2.5102436 | 0.02133504 | 1 | down | yes |
| 4:53383773|53399839 | 2.11871518 | 0.02159141 | 1 | up | yes |
| 13:42963255|42970670 | -2.7149079 | 0.02169133 | 1 | down | yes |
| 19:45022053|45025737 | -2.336148 | 0.02173819 | 1 | down | yes |
| 20:17947486|17957037 | 3.20707142 | 0.02183064 | 1 | up | yes |
| 2:71396141|71418639 | -3.0206565 | 0.02232189 | 1 | down | yes |
| 10:93676653|93687449 | -2.98961 | 0.0223867 | 1 | down | yes |
| 4:88475841|88476030 | -2.8957542 | 0.02262354 | 1 | down | yes |
| 4:105691976|105695668 | 2.60053265 | 0.02267481 | 1 | up | yes |
| 12:112946743|112950975 | -2.440619 | 0.0227498 | 1 | down | yes |
| 10:119038238|119038439 | -2.7487583 | 0.02302543 | 1 | down | yes |
| 7:84046324|84134951 | -2.3407663 | 0.02359853 | 1 | down | yes |
| 8:17560328|17562110 | -2.3458467 | 0.02373751 | 1 | down | yes |
| 17:54938924|54947312 | -2.8597513 | 0.02379497 | 1 | down | yes |
| 11:74118228|74123135 | -2.4169485 | 0.02405592 | 1 | down | yes |
| 15:68350617|68351402 | 3.03998404 | 0.02447686 | 1 | up | yes |
| 3:9669432|9671170 | 2.08199876 | 0.02451746 | 1 | up | yes |
| 11:46433474|46435037 | -2.2415195 | 0.02466075 | 1 | down | yes |
| 9:128600080|128605477 | -2.9405138 | 0.02489881 | 1 | down | yes |
| 8:105419144|105561481 | -2.3996272 | 0.02519941 | 1 | down | yes |
| 7:80761616|80789528 | -2.166891 | 0.02528824 | 1 | down | yes |
| 10:92111076|92181019 | -2.5069257 | 0.02539876 | 1 | down | yes |
| 5:113101739|113122826 | -2.2965568 | 0.02596669 | 1 | down | yes |
| 7:84129123|84134951 | -2.6201581 | 0.02639083 | 1 | down | yes |
| 8:142330901|142331831 | 2.07557749 | 0.02641372 | 1 | up | yes |
| 19:32643123|32643631 | 1.90831565 | 0.0265845 | 1 | up | yes |
| 10:68032778|68044563 | -2.4219052 | 0.02673445 | 1 | down | yes |
| X:148661908|148662768 | -2.1368103 | 0.0269048 | 1 | down | yes |
| 2:61482380|61490776 | 2.96362204 | 0.02691798 | 1 | up | yes |
| 14:22950314|22952683 | 1.92384684 | 0.02762357 | 1 | up | yes |
| 3:57242856|57267792 | 3.26020436 | 0.02873991 | 1 | up | yes |
| 5:73749837|73753202 | -2.4817503 | 0.02895611 | 1 | down | yes |
| 6:152329730|152331890 | 3.11537522 | 0.02926914 | 1 | up | yes |
| 12:69251129|69262562 | 3.1726631 | 0.02929301 | 1 | up | yes |
| 17:80289659|80290728 | -2.2898914 | 0.02972267 | 1 | down | yes |
| 3:64146830|64163129 | -2.1584349 | 0.03002433 | 1 | down | yes |
| 1:170726220|170730348 | 1.58844426 | 0.03152303 | 1 | up | yes |
| 4:88404876|88405613 | -2.5143186 | 0.03157335 | 1 | down | yes |
| 5:65242104|65273447 | -2.8364955 | 0.03181066 | 1 | down | yes |
| 1:102939035|102946956 | -2.8923456 | 0.03182733 | 1 | down | yes |
| 10:30450258|30451744 | -2.1542241 | 0.03222577 | 1 | down | yes |
| 11:71982761|71990717 | -2.1780637 | 0.03320324 | 1 | down | yes |
| 13:75692417|75727098 | 2.12444385 | 0.03337239 | 1 | up | yes |
| 2:169544721|169557297 | 3.08890248 | 0.03405044 | 1 | up | yes |
| 1:168019545|168023047 | 3.01222312 | 0.03408329 | 1 | up | yes |
| 14:24218133|24218431 | 2.07394047 | 0.03422074 | 1 | up | yes |
| 2:223984752|223992000 | -2.5224543 | 0.03433417 | 1 | down | yes |
| 3:10046580|10049505 | 2.36151593 | 0.03444431 | 1 | up | yes |
| 13:42926336|42970670 | -2.181505 | 0.03444618 | 1 | down | yes |
| 7:67055835|67083539 | -2.4224598 | 0.03521641 | 1 | down | yes |
| 8:38337305|38348215 | 2.89470144 | 0.03571296 | 1 | up | yes |
| 18:12420325|12421629 | 2.14474309 | 0.03659215 | 1 | up | yes |
| 12:7064267|7065299 | -2.7392927 | 0.03682162 | 1 | down | yes |
| 21:46484757|46498833 | -2.1872198 | 0.0371715 | 1 | down | yes |
| 14:73355626|73366981 | 2.0526393 | 0.03729233 | 1 | up | yes |
| 2:223998115|224001922 | -2.0173228 | 0.03751089 | 1 | down | yes |
| 15:80906663|80909306 | 1.70272444 | 0.03755474 | 1 | up | yes |
| X:109674402|109678415 | -2.1089966 | 0.03786093 | 1 | down | yes |
| 2:160300651|160318227 | -2.5100824 | 0.03814177 | 1 | down | yes |
| 1:32942252|32949774 | -2.0894124 | 0.03816561 | 1 | down | yes |
| 3:52918484|52928341 | -2.5680368 | 0.03835631 | 1 | down | yes |
| 3:195156449|195226856 | -2.0085922 | 0.03844985 | 1 | down | yes |
| 16:53844155|53879987 | -2.1552085 | 0.03850235 | 1 | down | yes |
| 2:223880124|223882072 | -2.1791208 | 0.03896839 | 1 | down | yes |
| 18:6301903|6312056 | -2.8769173 | 0.03909558 | 1 | down | yes |
| 8:22404696|22408496 | -2.1044171 | 0.039268 | 1 | down | yes |
| 9:116235139|116235637 | -2.3004161 | 0.03929864 | 1 | down | yes |
| 4:102304317|102315739 | -2.1590454 | 0.03967021 | 1 | down | yes |
| 1:243695591|243843282 | 2.17699774 | 0.03997965 | 1 | up | yes |
| 17:17214985|17219209 | -2.533877 | 0.04022615 | 1 | down | yes |
| 17:37330173|37330425 | 1.90239975 | 0.04027099 | 1 | up | yes |
| 1:235438769|235442911 | 2.00810182 | 0.04080457 | 1 | up | yes |
| 12:99806404|99825389 | -2.448017 | 0.041213 | 1 | down | yes |
| 9:5021963|5044520 | -2.309055 | 0.04141039 | 1 | down | yes |
| 14:71618757|71624236 | -2.0955678 | 0.0422463 | 1 | down | yes |
| 9:109263050|109279921 | -2.7077371 | 0.04274839 | 1 | down | yes |
| 13:20051433|20067390 | 2.86515813 | 0.0429265 | 1 | up | yes |
| 7:99386685|99388261 | 1.95850887 | 0.04338068 | 1 | up | yes |
| 1:6599047|6599452 | -2.0990532 | 0.04344132 | 1 | down | yes |
| 7:90716340|90726812 | -2.1412697 | 0.04383696 | 1 | down | yes |
| 8:140347757|140360193 | 2.76011139 | 0.04408098 | 1 | up | yes |
| 3:127694975|127695190 | -2.7484741 | 0.04411623 | 1 | down | yes |
| 11:596923|597570 | 1.58074963 | 0.04427124 | 1 | up | yes |
| 12:23604387|23665564 | -2.5736014 | 0.04427432 | 1 | down | yes |
| 12:29659880|29661379 | -2.4859603 | 0.04438713 | 1 | down | yes |
| 7:143292300|143292698 | 1.76079796 | 0.04444695 | 1 | up | yes |
| 22:43059384|43064324 | 1.91782781 | 0.04490208 | 1 | up | yes |
| 20:49260463|49263483 | -2.1641233 | 0.0450386 | 1 | down | yes |
| 7:84046324|84194668 | -2.4647375 | 0.04527876 | 1 | down | yes |
| 11:16095996|16111926 | -2.5436476 | 0.04536368 | 1 | down | yes |
| 6:107503657|107533610 | -2.5819749 | 0.04552637 | 1 | down | yes |
| 2:72134761|72135419 | -2.4160492 | 0.04560267 | 1 | down | yes |
| 11:94795011|94831541 | -2.1971266 | 0.04585686 | 1 | down | yes |
| 10:179994|210048 | 2.84835238 | 0.04637736 | 1 | up | yes |
| 9:99959917|99960155 | 2.73702164 | 0.0464042 | 1 | up | yes |
| 10:115461941|115469329 | 2.26421757 | 0.0468011 | 1 | up | yes |
| 16:29904852|29905959 | -2.104443 | 0.04687793 | 1 | down | yes |
| 18:55403454|55464137 | -2.234238 | 0.04692819 | 1 | down | yes |
| 3:33812072|33822082 | 2.13070195 | 0.04693107 | 1 | up | yes |
| 6:88904715|88941180 | -2.0548488 | 0.04694821 | 1 | down | yes |
| 16:879570|954666 | -2.158587 | 0.04698215 | 1 | down | yes |
| 8:102342473|102361626 | 2.74391547 | 0.0470835 | 1 | up | yes |
| 15:85639374|85645954 | -2.2731165 | 0.0474196 | 1 | down | yes |
| 2:237748364|237760205 | -2.7026235 | 0.04752141 | 1 | down | yes |
| 5:146000058|146014061 | -2.0209826 | 0.04813525 | 1 | down | yes |
| 10:92111076|92192636 | -2.1164034 | 0.04818809 | 1 | down | yes |
| 12:23734684|23741039 | -2.2073096 | 0.04824419 | 1 | down | yes |
| 14:100353687|100361921 | -2.8844148 | 0.04870986 | 1 | down | yes |
| 9:116219937|116227552 | -2.1449886 | 0.04880648 | 1 | down | yes |
| 13:30251931|30255615 | 2.72122552 | 0.04895916 | 1 | up | yes |
| 1:32948222|32949774 | -1.8993061 | 0.04897471 | 1 | down | yes |
| 5:65170617|65188220 | -2.5143923 | 0.04906542 | 1 | down | yes |
| 19:14441143|14441443 | 1.47758576 | 0.04925581 | 1 | up | yes |
| 9:131459164|131459356 | 2.08756839 | 0.04941287 | 1 | up | yes |
| 10:7243558|7285954 | -1.9542912 | 0.04979502 | 1 | down | yes |
| 7:111989015|112004131 | -1.9814785 | 0.04990831 | 1 | down | yes |