**Supplemental Table S8. Enriched GO terms in genes altered by hydrogen peroxide (sugar effects included)**

1. GO enrichment terms for genes up-regulated in hydrogen peroxide(sugar effects included)

|  |  |  |
| --- | --- | --- |
| GO:0050896 | response to stimulus(201) | 4.60E-07 |
| GO:0009653 | anatomical structure morphogenesis(136) | 1.59E-06 |
| GO:0007275 | multicellular organismal development(203) | 1.63E-05 |
| GO:0048856 | anatomical structure development(202) | 1.60E-04 |
| GO:0032502 | developmental process(226) | 1.68E-04 |
| GO:0032501 | multicellular organismal process(249) | 2.02E-04 |
| GO:0042221 | response to chemical stimulus(75) | 3.08E-04 |
| GO:0051716 | cellular response to stimulus(134) | 8.64E-04 |
| GO:0048468 | cell development(97) | 9.51E-04 |
| GO:0050794 | regulation of cellular process(205) | 9.73E-04 |
| GO:0065007 | biological regulation(232) | 0.00112 |
| GO:0007165 | signal transduction(110) | 0.001661 |
| GO:0050789 | regulation of biological process(216) | 0.002002 |
| GO:0007154 | cell communication(138) | 0.002041 |
| GO:0003006 | developmental process involved in reproduction(62) | 0.003867 |
| GO:0009791 | post-embryonic development(58) | 0.003884 |
| GO:0002165 | instar larval or pupal development(56) | 0.003952 |
| GO:0051704 | multi-organism process(45) | 0.004304 |
| GO:0009790 | embryo development(60) | 0.005251 |
| GO:0023052 | signaling(134) | 0.005509 |
| GO:0016265 | death(38) | 0.007544 |
| GO:0009886 | post-embryonic morphogenesis(49) | 0.008312 |
| GO:0050793 | regulation of developmental process(51) | 0.014845 |
| GO:0048610 | cellular process involved in reproduction(66) | 0.015483 |
| GO:0048477 | oogenesis(54) | 0.01809 |
| GO:0022414 | reproductive process(88) | 0.021964 |
| GO:0048707 | instar larval or pupal morphogenesis(47) | 0.022837 |
| GO:0007559 | histolysis(18) | 0.02439 |
| GO:0016271 | tissue death(18) | 0.02439 |
| GO:0007552 | metamorphosis(49) | 0.024404 |
| GO:0030182 | neuron differentiation(59) | 0.025197 |
| GO:0051707 | response to other organism(29) | 0.027074 |
| GO:0007292 | female gamete generation(54) | 0.030276 |
| GO:0007423 | sensory organ development(49) | 0.032088 |
| GO:0006950 | response to stress(74) | 0.032796 |
| GO:0009607 | response to biotic stimulus(29) | 0.033398 |
| GO:0048731 | system development(158) | 0.038977 |
| GO:0012501 | programmed cell death(38) | 0.048279 |
| GO:0022603 | regulation of anatomical structure morphogenesis(30) | 0.048886 |

1. GO enrichment terms for genes down-regulated in hydrogen peroxide(sugar effects included)

|  |  |  |
| --- | --- | --- |
| GO:0055114 | oxidation-reduction process(111) | 2.30E-12 |
| GO:0006508 | proteolysis(125) | 3.65E-12 |
| GO:0005975 | carbohydrate metabolic process(73) | 1.11E-07 |
| GO:0044262 | cellular carbohydrate metabolic process(45) | 4.02E-07 |
| GO:0006629 | lipid metabolic process(64) | 1.55E-06 |
| GO:0032787 | monocarboxylic acid metabolic process(24) | 2.58E-04 |
| GO:0019318 | hexose metabolic process(22) | 2.63E-04 |
| GO:0006631 | fatty acid metabolic process(18) | 6.86E-04 |
| GO:0006066 | alcohol metabolic process(33) | 0.004615 |
| GO:0008152 | metabolic process(528) | 0.005934 |
| GO:0005996 | monosaccharide metabolic process(22) | 0.00787 |
| GO:0044281 | small molecule metabolic process(105) | 0.008164 |
| GO:0006082 | organic acid metabolic process(46) | 0.012088 |
| GO:0019752 | carboxylic acid metabolic process(46) | 0.012088 |
| GO:0043436 | oxoacid metabolic process(46) | 0.012088 |
| GO:0006091 | generation of precursor metabolites and energy(32) | 0.037811 |