

(A) KEGG pathway maps enriched in 80 canonical componenets (CCs)

| ID | Pathway map | P-value (log) |
|----------|---|---------------|
| ##### | CC1 ##### | |
| none | | |
| ##### | CC2 ##### | |
| map04727 | GABAergic synapse | 20.1 |
| map04080 | Neuroactive ligand-receptor interaction | 11.858 |
| ##### | CC3 ##### | |
| map04970 | Salivary secretion | 2.661 |
| ##### | CC4 ##### | |
| map04020 | Calcium signaling pathway | 16.806 |
| map04260 | Cardiac muscle contraction | 13.71 |
| map04728 | Dopaminergic synapse | 11.147 |
| map04010 | MAPK signaling pathway | 10.617 |
| map04970 | Salivary secretion | 5.762 |
| map04270 | Vascular smooth muscle contraction | 5.665 |
| map04740 | Olfactory transduction | 3.839 |
| map04912 | GnRH signaling pathway | 3.389 |
| map04070 | Phosphatidylinositol signaling system | 3.309 |
| map04725 | Cholinergic synapse | 3.108 |
| map04744 | Phototransduction | 2.461 |
| map04720 | Long-term potentiation | 2.37 |
| map04114 | Oocyte meiosis | 2.032 |
| ##### | CC5 ##### | |
| map00590 | Arachidonic acid metabolism | 5.62 |
| map04742 | Taste transduction | 1.895 |
| ##### | CC6 ##### | |
| none | | |
| ##### | CC7 ##### | |
| map00590 | Arachidonic acid metabolism | 1.794 |
| ##### | CC8 ##### | |
| map04728 | Dopaminergic synapse | 1.484 |
| ##### | CC9 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 11.977 |
| map04728 | Dopaminergic synapse | 3.538 |
| map04020 | Calcium signaling pathway | 2.079 |
| ##### | CC10 ##### | |
| none | | |
| ##### | CC11 ##### | |
| none | | |

| | | |
|----------|---|--------|
| ##### | CC12 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 3.835 |
| map04740 | Olfactory transduction | 3.535 |
| map04744 | Phototransduction | 2.682 |
| map04725 | Cholinergic synapse | 2.156 |
| map04070 | Phosphatidylinositol signaling system | 1.747 |
| map04910 | Insulin signaling pathway | 1.373 |
| ##### | CC13 ##### | |
| none | | |
| ##### | CC14 ##### | |
| map00590 | Arachidonic acid metabolism | 1.736 |
| ##### | CC15 ##### | |
| none | | |
| ##### | CC16 ##### | |
| map04260 | Cardiac muscle contraction | 17.189 |
| map04010 | MAPK signaling pathway | 12.905 |
| map04020 | Calcium signaling pathway | 5.762 |
| map04725 | Cholinergic synapse | 3.165 |
| map04728 | Dopaminergic synapse | 2.026 |
| map04727 | GABAergic synapse | 1.873 |
| map04912 | GnRH signaling pathway | 1.609 |
| map04270 | Vascular smooth muscle contraction | 1.403 |
| ##### | CC17 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 7.946 |
| map04970 | Salivary secretion | 4.724 |
| map04020 | Calcium signaling pathway | 3.283 |
| map04725 | Cholinergic synapse | 2.442 |
| map04270 | Vascular smooth muscle contraction | 1.546 |
| ##### | CC18 ##### | |
| map04728 | Dopaminergic synapse | 1.872 |
| ##### | CC19 ##### | |
| none | | |
| ##### | CC20 ##### | |
| none | | |
| ##### | CC21 ##### | |
| map03050 | Proteasome | 50.746 |
| ##### | CC22 ##### | |
| none | | |
| ##### | CC23 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 7.293 |
| map04728 | Dopaminergic synapse | 4.146 |

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|----------|---|--------|
| map04970 | Salivary secretion | 2.122 |
| map04020 | Calcium signaling pathway | 1.863 |
| ##### | CC24 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 24.344 |
| map04727 | GABAergic synapse | 12.392 |
| ##### | CC25 ##### | |
| map00590 | Arachidonic acid metabolism | 4.506 |
| ##### | CC26 ##### | |
| map04010 | MAPK signaling pathway | 16.806 |
| map04260 | Cardiac muscle contraction | 15.745 |
| map04020 | Calcium signaling pathway | 5.193 |
| map04725 | Cholinergic synapse | 3.406 |
| map04728 | Dopaminergic synapse | 2.169 |
| map04727 | GABAergic synapse | 2.035 |
| map04912 | GnRH signaling pathway | 1.783 |
| map04270 | Vascular smooth muscle contraction | 1.546 |
| ##### | CC27 ##### | |
| none | | |
| ##### | CC28 ##### | |
| map04727 | GABAergic synapse | 15.745 |
| map04080 | Neuroactive ligand-receptor interaction | 13.45 |
| ##### | CC29 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 5.669 |
| map04740 | Olfactory transduction | 3 |
| map04725 | Cholinergic synapse | 2.187 |
| map04744 | Phototransduction | 2.149 |
| map04970 | Salivary secretion | 2.035 |
| map04971 | Gastric acid secretion | 1.995 |
| map04964 | Proximal tubule bicarbonate reclamation | 1.602 |
| ##### | CC30 ##### | |
| map04742 | Taste transduction | 1.519 |
| ##### | CC31 ##### | |
| map04260 | Cardiac muscle contraction | 8.205 |
| map04010 | MAPK signaling pathway | 5.454 |
| map04020 | Calcium signaling pathway | 2.306 |
| map04742 | Taste transduction | 2.096 |
| ##### | CC32 ##### | |
| none | | |
| ##### | CC33 ##### | |
| map04260 | Cardiac muscle contraction | 6.204 |
| map04010 | MAPK signaling pathway | 3.174 |

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|----------|---|--------|
| map04742 | Taste transduction | 1.403 |
| ##### | CC34 ##### | |
| map00120 | Primary bile acid biosynthesis | 8.599 |
| map00140 | Steroid hormone biosynthesis | 4.803 |
| map00100 | Steroid biosynthesis | 2.343 |
| map03320 | PPAR signaling pathway | 1.519 |
| ##### | CC35 ##### | |
| map04727 | GABAergic synapse | 20.1 |
| map04080 | Neuroactive ligand-receptor interaction | 11.858 |
| ##### | CC36 ##### | |
| map04010 | MAPK signaling pathway | 8.524 |
| map04260 | Cardiac muscle contraction | 6.349 |
| map00590 | Arachidonic acid metabolism | 4.509 |
| map04020 | Calcium signaling pathway | 2.079 |
| ##### | CC37 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 15.158 |
| map04727 | GABAergic synapse | 14.898 |
| ##### | CC38 ##### | |
| none | | |
| ##### | CC39 ##### | |
| map04260 | Cardiac muscle contraction | 13.836 |
| map04020 | Calcium signaling pathway | 10.165 |
| map04010 | MAPK signaling pathway | 9.641 |
| map04970 | Salivary secretion | 5.848 |
| map04270 | Vascular smooth muscle contraction | 3.061 |
| map04728 | Dopaminergic synapse | 2.428 |
| ##### | CC40 ##### | |
| none | | |
| ##### | CC41 ##### | |
| none | | |
| ##### | CC42 ##### | |
| map00910 | Nitrogen metabolism | 18.713 |
| map04964 | Proximal tubule bicarbonate reclamation | 1.512 |
| ##### | CC43 ##### | |
| map04010 | MAPK signaling pathway | 8.524 |
| map04020 | Calcium signaling pathway | 8.428 |
| map04260 | Cardiac muscle contraction | 5.193 |
| map04727 | GABAergic synapse | 2.102 |
| map04725 | Cholinergic synapse | 1.764 |
| ##### | CC44 ##### | |
| map04010 | MAPK signaling pathway | 8.155 |

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|----------|---|--------|
| map04260 | Cardiac muscle contraction | 7.576 |
| map04020 | Calcium signaling pathway | 5.323 |
| ##### | CC45 ##### | |
| map04260 | Cardiac muscle contraction | 14.183 |
| map04010 | MAPK signaling pathway | 11.368 |
| map04020 | Calcium signaling pathway | 4.803 |
| map04725 | Cholinergic synapse | 3.539 |
| map04727 | GABAergic synapse | 1.532 |
| ##### | CC46 ##### | |
| map00590 | Arachidonic acid metabolism | 9.47 |
| ##### | CC47 ##### | |
| map04010 | MAPK signaling pathway | 5.109 |
| map04260 | Cardiac muscle contraction | 4.932 |
| map04020 | Calcium signaling pathway | 2.079 |
| map04728 | Dopaminergic synapse | 1.945 |
| map04270 | Vascular smooth muscle contraction | 1.327 |
| ##### | CC48 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 6.679 |
| map04725 | Cholinergic synapse | 1.879 |
| map04970 | Salivary secretion | 1.536 |
| ##### | CC49 ##### | |
| none | | |
| ##### | CC50 ##### | |
| map04728 | Dopaminergic synapse | 1.818 |
| ##### | CC51 ##### | |
| map03040 | Spliceosome | 1.439 |
| ##### | CC52 ##### | |
| map04728 | Dopaminergic synapse | 7.997 |
| map04010 | MAPK signaling pathway | 7.444 |
| map04260 | Cardiac muscle contraction | 7.263 |
| map04020 | Calcium signaling pathway | 6.515 |
| ##### | CC53 ##### | |
| none | | |
| ##### | CC54 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 4.59 |
| map04728 | Dopaminergic synapse | 3.553 |
| ##### | CC55 ##### | |
| map04728 | Dopaminergic synapse | 3.825 |
| map04080 | Neuroactive ligand-receptor interaction | 1.829 |
| ##### | CC56 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 4.233 |

| | | |
|----------|---|--------|
| map04740 | Olfactory transduction | 3.121 |
| map04744 | Phototransduction | 2.273 |
| map04020 | Calcium signaling pathway | 2.01 |
| map04114 | Oocyte meiosis | 1.834 |
| map04070 | Phosphatidylinositol signaling system | 1.381 |
| ##### | CC57 ##### | |
| map00590 | Arachidonic acid metabolism | 2.688 |
| map04970 | Salivary secretion | 2.028 |
| ##### | CC58 ##### | |
| map04080 | Neuroactive ligand-receptor interaction | 9.148 |
| ##### | CC59 ##### | |
| none | | |
| ##### | CC60 ##### | |
| none | | |
| ##### | CC61 ##### | |
| none | | |
| ##### | CC62 ##### | |
| map04060 | Cytokine-cytokine receptor interaction | 2.688 |
| ##### | CC63 ##### | |
| map04728 | Dopaminergic synapse | 1.546 |
| map03040 | Spliceosome | 1.459 |
| ##### | CC64 ##### | |
| map04145 | Phagosome | 3.087 |
| map04540 | Gap junction | 2.469 |
| ##### | CC65 ##### | |
| map00120 | Primary bile acid biosynthesis | 7.444 |
| map00140 | Steroid hormone biosynthesis | 3.843 |
| map00100 | Steroid biosynthesis | 1.867 |
| ##### | CC66 ##### | |
| map04727 | GABAergic synapse | 20.1 |
| map04080 | Neuroactive ligand-receptor interaction | 11.858 |
| ##### | CC67 ##### | |
| map03040 | Spliceosome | 1.556 |
| ##### | CC68 ##### | |
| map03040 | Spliceosome | 1.482 |
| ##### | CC69 ##### | |
| none | | |
| ##### | CC70 ##### | |
| none | | |
| ##### | CC71 ##### | |
| map00590 | Arachidonic acid metabolism | 1.854 |

| ##### CC72 ##### | | |
|------------------|---|-------|
| map04964 | Proximal tubule bicarbonate reclamation | 1.512 |
| ##### CC73 ##### | | |
| none | | |
| ##### CC74 ##### | | |
| map04920 | Adipocytokine signaling pathway | 2.918 |
| map04080 | Neuroactive ligand-receptor interaction | 1.484 |
| ##### CC75 ##### | | |
| map04727 | GABAergic synapse | 14.25 |
| map04260 | Cardiac muscle contraction | 5.777 |
| map04010 | MAPK signaling pathway | 5.186 |
| map04080 | Neuroactive ligand-receptor interaction | 4.318 |
| map04020 | Calcium signaling pathway | 2.102 |
| map04728 | Dopaminergic synapse | 1.534 |
| ##### CC76 ##### | | |
| map04144 | Endocytosis | 2.523 |
| map04970 | Salivary secretion | 2.234 |
| ##### CC77 ##### | | |
| none | | |
| ##### CC78 ##### | | |
| map04080 | Neuroactive ligand-receptor interaction | 5.325 |
| map04970 | Salivary secretion | 3.003 |
| map04728 | Dopaminergic synapse | 1.728 |
| map04020 | Calcium signaling pathway | 1.593 |
| ##### CC79 ##### | | |
| map04260 | Cardiac muscle contraction | 14.25 |
| map04010 | MAPK signaling pathway | 9.083 |
| map04020 | Calcium signaling pathway | 3.368 |
| map04742 | Taste transduction | 1.439 |
| ##### CC80 ##### | | |
| map04810 | Regulation of actin cytoskeleton | 1.559 |
| map04020 | Calcium signaling pathway | 1.393 |

(B) KEGG BRITE terms enriched in 80 canonical componenets (CCs)

| BRITE category: BRITE term | P-value (log) |
|---|---------------|
| ##### CC1 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.339 |
| Ion Channels: Na+ channel, SCN beta | 3.811 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.003 |

| Receptors and Channels: Voltage-gated cation channels | 2.962 |
|--|--------|
| G Protein-Coupled Receptors: Biogenic amine | 2.019 |
| Receptors and Channels: Rhodopsin family: amine receptors | 2.019 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.795 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.542 |
| ##### CC2 ##### | |
| Ion Channels: GABA-A | 30.842 |
| Receptors and Channels: Cys-loop superfamily | 23.47 |
| ##### CC3 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 6.84 |
| Receptors and Channels: Rhodopsin family: amine receptors | 6.84 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.048 |
| Ion Channels: Na+ channel, SCN beta | 3.659 |
| Receptors and Channels: Epithelial and related Na+ channels | 2.798 |
| Receptors and Channels: Voltage-gated cation channels | 2.528 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.691 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.439 |
| ##### CC4 ##### | |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 12.728 |
| G Protein-Coupled Receptors: Biogenic amine | 11.256 |
| Receptors and Channels: Rhodopsin family: amine receptors | 11.256 |
| Receptors and Channels: Related to voltage-gated cation channels | 10.354 |
| Receptors and Channels: Voltage-gated cation channels | 8.798 |
| Ion Channels: Ca2+ channel, CACN gamma | 4.177 |
| Ion Channels: Ca2+ channel, CACN beta | 4.177 |
| Ion Channels: Ryanodine receptor (RYR) | 2.881 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.589 |
| Ion Channels: IP3 receptor | 1.589 |
| ##### CC5 ##### | |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 6.412 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 4.511 |
| Ion Channels: Na+ channel, SCN beta | 3.34 |
| Receptors and Channels: Voltage-gated cation channels | 3.196 |
| Receptors and Channels: Epithelial and related Na+ channels | 2.389 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.5 |
| ##### CC6 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 6.102 |
| Ion Channels: Na+ channel, SCN beta | 4.223 |
| Receptors and Channels: Voltage-gated cation channels | 4.137 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.539 |

| | |
|--|--------|
| Ion Channels: Epithelial sodium channel (SCNN) | 2.037 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.795 |
| ##### CC7 ##### | |
| Ion Channels: Neurotransmitter transporters | 1.709 |
| Receptors and Channels: Related to neurotransmitter transporters | 1.709 |
| ##### CC8 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.048 |
| Receptors and Channels: Voltage-gated cation channels | 4.226 |
| Ion Channels: Na+ channel, SCN beta | 3.659 |
| Receptors and Channels: Epithelial and related Na+ channels | 2.798 |
| G Protein-Coupled Receptors: Biogenic amine | 1.826 |
| Receptors and Channels: Rhodopsin family: amine receptors | 1.826 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.691 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.439 |
| ##### CC9 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 16.034 |
| Receptors and Channels: Rhodopsin family: amine receptors | 16.034 |
| Ion Channels: Neurotransmitter transporters | 2.196 |
| Receptors and Channels: Related to neurotransmitter transporters | 2.196 |
| G Protein-Coupled Receptors: Neuropeptide | 1.926 |
| ##### CC10 ##### | |
| Ion Channels: Na+ channel, SCN beta | 3.659 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 3.416 |
| Receptors and Channels: Epithelial and related Na+ channels | 2.798 |
| Receptors and Channels: Voltage-gated cation channels | 2.528 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.691 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.439 |
| ##### CC11 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.436 |
| Ion Channels: Na+ channel, SCN beta | 3.868 |
| Receptors and Channels: Voltage-gated cation channels | 3.113 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.08 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.83 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.577 |
| ##### CC12 ##### | |
| Ion Channels: Acetylcholine (nicotinic) | 9.975 |
| Receptors and Channels: Cys-loop superfamily | 6.558 |
| ##### CC13 ##### | |
| Ion Channels: Na+ channel, SCN beta | 3.933 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 3.801 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.156 |

| | |
|--|--------|
| Receptors and Channels: Voltage-gated cation channels | 2.406 |
| G Protein-Coupled Receptors: Neuropeptide | 2.143 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.864 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.61 |
| ##### CC14 ##### | |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 1.924 |
| ##### CC15 ##### | |
| none | |
| ##### CC16 ##### | |
| Receptors and Channels: Related to voltage-gated cation channels | 12.498 |
| Receptors and Channels: Voltage-gated cation channels | 11.244 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 10.179 |
| Ion Channels: Ca2+ channel, CACN gamma | 5.017 |
| Ion Channels: Ca2+ channel, CACN beta | 5.017 |
| Ion Channels: Ryanodine receptor (RYR) | 3.461 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.973 |
| Ion Channels: IP3 receptor | 1.973 |
| ##### CC17 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 9.717 |
| Receptors and Channels: Rhodopsin family: amine receptors | 9.717 |
| Ion Channels: Acetylcholine (nicotinic) | 5.752 |
| Receptors and Channels: Cys-loop superfamily | 3.179 |
| Nuclear Receptors: | 1.373 |
| ##### CC18 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 6.33 |
| G Protein-Coupled Receptors: Biogenic amine | 4.696 |
| Receptors and Channels: Rhodopsin family: amine receptors | 4.696 |
| Ion Channels: Na+ channel, SCN beta | 3.382 |
| Receptors and Channels: Voltage-gated cation channels | 2.562 |
| Receptors and Channels: Epithelial and related Na+ channels | 2.437 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.527 |
| ##### CC19 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.808 |
| Ion Channels: Na+ channel, SCN beta | 4.076 |
| Receptors and Channels: Voltage-gated cation channels | 3.664 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.334 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.951 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.694 |
| ##### CC20 ##### | |
| Ion Channels: Neurotransmitter transporters | 2.542 |

| | |
|--|--------|
| Receptors and Channels: Related to neurotransmitter transporters | 2.542 |
| ##### CC21 ##### | |
| Peptidases: Family T1: proteasome family | 29.111 |
| Proteasome: Regulatory particles | 16.241 |
| Enzymes: Acting on peptide bonds (peptidases) | 9.702 |
| ##### CC22 ##### | |
| Ion Channels: Na+ channel, SCN beta | 4.305 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 4.305 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.659 |
| Receptors and Channels: Voltage-gated cation channels | 3.311 |
| Ion Channels: Epithelial sodium channel (SCNN) | 2.094 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.845 |
| ##### CC23 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 13.277 |
| Receptors and Channels: Rhodopsin family: amine receptors | 13.277 |
| ##### CC24 ##### | |
| Receptors and Channels: Cys-loop superfamily | 32.344 |
| Ion Channels: GABA-A | 22.569 |
| Ion Channels: Acetylcholine (nicotinic) | 8.811 |
| G Protein-Coupled Receptors: Biogenic amine | 4.609 |
| Receptors and Channels: Rhodopsin family: amine receptors | 4.609 |
| ##### CC25 ##### | |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 5.712 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 3.854 |
| Ion Channels: Na+ channel, SCN beta | 2.981 |
| Receptors and Channels: Voltage-gated cation channels | 2.657 |
| Receptors and Channels: Epithelial and related Na+ channels | 1.902 |
| ##### CC26 ##### | |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 15.584 |
| Receptors and Channels: Voltage-gated cation channels | 15.01 |
| Receptors and Channels: Related to voltage-gated cation channels | 6.341 |
| Ion Channels: Ca2+ channel, CACN gamma | 5.131 |
| Ion Channels: Ca2+ channel, CACN beta | 5.131 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 2.029 |
| Ion Channels: IP3 receptor | 2.029 |
| ##### CC27 ##### | |
| none | |
| ##### CC28 ##### | |
| Ion Channels: GABA-A | 26.176 |
| Receptors and Channels: Cys-loop superfamily | 18.853 |

| | |
|---|--------|
| ##### CC29 ##### | |
| Ion Channels: Acetylcholine (nicotinic) | 10.476 |
| Receptors and Channels: Cys-loop superfamily | 6.474 |
| G Protein-Coupled Receptors: Biogenic amine | 3.248 |
| Receptors and Channels: Rhodopsin family: amine receptors | 3.248 |
| Enzymes: Carbon-oxygen lyases | 1.607 |
| ##### CC30 ##### | |
| Ion Channels: Na+ channel, SCN beta | 4.076 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 3.987 |
| Receptors and Channels: Voltage-gated cation channels | 3.664 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.334 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.951 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.694 |
| ##### CC31 ##### | |
| Receptors and Channels: Related to voltage-gated cation channels | 12.655 |
| Receptors and Channels: Voltage-gated cation channels | 4.624 |
| Ion Channels: Ryanodine receptor (RYR) | 3.506 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 3.059 |
| Ion Channels: Ca2+ channel, CACN gamma | 3.003 |
| Ion Channels: Ca2+ channel, CACN beta | 3.003 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 2.002 |
| Ion Channels: IP3 receptor | 2.002 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.602 |
| ##### CC32 ##### | |
| Transcription Factors: Zinc finger | 11.242 |
| Receptors and Channels: Subfamily 3: estrogen like | 8.632 |
| Receptors and Channels: Subfamily 2: hepatocyte nuclear factor 4 like | 3.388 |
| Nuclear Receptors: | 3.273 |
| Nuclear Receptors: | 2.769 |
| G Protein-Coupled Receptors: Biogenic amine | 2.274 |
| Receptors and Channels: Rhodopsin family: amine receptors | 2.274 |
| Nuclear Receptors: | 1.853 |
| Nuclear Receptors: | 1.853 |
| ##### CC33 ##### | |
| Receptors and Channels: Related to voltage-gated cation channels | 10.588 |
| Receptors and Channels: Voltage-gated cation channels | 10.447 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.339 |
| Ion Channels: Ryanodine receptor (RYR) | 2.958 |
| Ion Channels: Na+ channel, SCN beta | 2.958 |
| Ion Channels: Ca2+ channel, CACN gamma | 2.426 |
| Ion Channels: Ca2+ channel, CACN beta | 2.426 |

| | |
|--|--------|
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 2.303 |
| Receptors and Channels: Epithelial and related Na+ channels | 1.866 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.635 |
| Ion Channels: IP3 receptor | 1.635 |
| ##### CC34 ##### | |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 19.353 |
| Cytochrome P450: CYP8 family | 2.36 |
| Cytochrome P450: CYP7 family | 2.36 |
| Cytochrome P450: CYP4 family | 2.36 |
| Cytochrome P450: CYP27 family | 2.36 |
| ##### CC35 ##### | |
| Ion Channels: GABA-A | 30.842 |
| Receptors and Channels: Cys-loop superfamily | 23.47 |
| ##### CC36 ##### | |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 7.94 |
| Receptors and Channels: Voltage-gated cation channels | 7.291 |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of o | 6.558 |
| Receptors and Channels: Related to voltage-gated cation channels | 6.061 |
| Ion Channels: Ca2+ channel, CACN gamma | 2.928 |
| Ion Channels: Ca2+ channel, CACN beta | 2.928 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.951 |
| Ion Channels: IP3 receptor | 1.951 |
| ##### CC37 ##### | |
| Ion Channels: GABA-A | 25.251 |
| Receptors and Channels: Cys-loop superfamily | 17.927 |
| G Protein-Coupled Receptors: Neuropeptide | 3.299 |
| Receptors and Channels: Rhodopsin family: peptide receptors | 1.883 |
| ##### CC38 ##### | |
| Transcription Factors: Zinc finger | 15.466 |
| Receptors and Channels: Subfamily 3: estrogen like | 12.472 |
| Nuclear Receptors: | 5.339 |
| Receptors and Channels: Subfamily 2: hepatocyte nuclear factor 4 like | 3.973 |
| Nuclear Receptors: | 3.697 |
| Nuclear Receptors: | 2.123 |
| Nuclear Receptors: | 2.123 |
| ##### CC39 ##### | |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 10.438 |
| Receptors and Channels: Related to voltage-gated cation channels | 10.438 |
| Receptors and Channels: Voltage-gated cation channels | 10.045 |
| G Protein-Coupled Receptors: Biogenic amine | 8.43 |

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| Receptors and Channels: Rhodopsin family: amine receptors | 8.43 |
| Ion Channels: Ca2+ channel, CACN gamma | 4.207 |
| Ion Channels: Ca2+ channel, CACN beta | 4.207 |
| Ion Channels: Ryanodine receptor (RYR) | 2.907 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.603 |
| Ion Channels: IP3 receptor | 1.603 |
| ##### CC40 ##### | |
| Nuclear Receptors: | 2.186 |
| Receptors and Channels: Subfamily 3: estrogen like | 1.618 |
| ##### CC41 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.808 |
| Ion Channels: Na+ channel, SCN beta | 4.076 |
| Receptors and Channels: Voltage-gated cation channels | 3.664 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.334 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.951 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.694 |
| ##### CC42 ##### | |
| Enzymes: Carbon-oxygen lyases | 20.614 |
| ##### CC43 ##### | |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 12.415 |
| Receptors and Channels: Voltage-gated cation channels | 7.592 |
| G Protein-Coupled Receptors: Biogenic amine | 2.443 |
| Receptors and Channels: Rhodopsin family: amine receptors | 2.443 |
| Ion Channels: Ca2+ channel, CACN beta | 1.742 |
| ##### CC44 ##### | |
| Receptors and Channels: Related to voltage-gated cation channels | 13.809 |
| Receptors and Channels: Voltage-gated cation channels | 7.123 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 6.929 |
| Ion Channels: Ryanodine receptor (RYR) | 3.811 |
| Ion Channels: Ca2+ channel, CACN gamma | 3.286 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 2.194 |
| Ion Channels: IP3 receptor | 2.194 |
| Ion Channels: Ca2+ channel, CACN beta | 1.542 |
| ##### CC45 ##### | |
| Receptors and Channels: Voltage-gated cation channels | 9.747 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 9.588 |
| Receptors and Channels: Related to voltage-gated cation channels | 7.523 |
| Ion Channels: Ca2+ channel, CACN gamma | 4.733 |
| Ion Channels: Ca2+ channel, CACN beta | 4.733 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.853 |
| Ion Channels: IP3 receptor | 1.853 |

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| G Protein-Coupled Receptors: Neuropeptide | 1.528 |
| ##### CC46 ##### | |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 8.62 |
| ##### CC47 ##### | |
| Receptors and Channels: Related to voltage-gated cation channels | 6.061 |
| Receptors and Channels: Voltage-gated cation channels | 5.208 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 4.376 |
| Ion Channels: Ca2+ channel, CACN gamma | 2.928 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.951 |
| Ion Channels: IP3 receptor | 1.951 |
| ##### CC48 ##### | |
| Ion Channels: Acetylcholine (nicotinic) | 11.688 |
| Receptors and Channels: Cys-loop superfamily | 7.648 |
| G Protein-Coupled Receptors: Biogenic amine | 2.548 |
| Receptors and Channels: Rhodopsin family: amine receptors | 2.548 |
| ##### CC49 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 6.929 |
| Ion Channels: Na+ channel, SCN beta | 3.659 |
| Receptors and Channels: Voltage-gated cation channels | 3.334 |
| Receptors and Channels: Epithelial and related Na+ channels | 2.798 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.691 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.439 |
| ##### CC50 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.436 |
| Ion Channels: Na+ channel, SCN beta | 3.868 |
| G Protein-Coupled Receptors: Biogenic amine | 3.248 |
| Receptors and Channels: Rhodopsin family: amine receptors | 3.248 |
| Receptors and Channels: Voltage-gated cation channels | 3.113 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.08 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.83 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.577 |
| ##### CC51 ##### | |
| Chaperones and folding catalysts: Peptidyl prolyl isomerase | 41.316 |
| Enzymes: cis-trans-Isomerases | 41.316 |
| Spliceosome: Other components | 4.605 |
| ##### CC52 ##### | |
| Receptors and Channels: Related to voltage-gated cation channels | 11.66 |
| Receptors and Channels: Voltage-gated cation channels | 8.348 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 7.43 |
| Ion Channels: Ryanodine receptor (RYR) | 3.248 |

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| Ion Channels: Ca2+ channel, CACN gamma | 2.736 |
| Ion Channels: Ca2+ channel, CACN beta | 2.736 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.83 |
| Ion Channels: IP3 receptor | 1.83 |
| G Protein-Coupled Receptors: Biogenic amine | 1.311 |
| Receptors and Channels: Rhodopsin family: amine receptors | 1.311 |
| ##### CC53 ##### | |
| none | |
| ##### CC54 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 5.048 |
| Receptors and Channels: Rhodopsin family: amine receptors | 5.048 |
| G Protein-Coupled Receptors: Neuropeptide | 3.062 |
| Receptors and Channels: Rhodopsin family: peptide receptors | 2.003 |
| ##### CC55 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 3.149 |
| Receptors and Channels: Rhodopsin family: amine receptors | 3.149 |
| Ion Channels: Neurotransmitter transporters | 2.308 |
| Receptors and Channels: Related to neurotransmitter transporters | 2.308 |
| ##### CC56 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 6.321 |
| Receptors and Channels: Rhodopsin family: amine receptors | 6.321 |
| Nuclear Receptors: | 1.653 |
| ##### CC57 ##### | |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 3.729 |
| G Protein-Coupled Receptors: Biogenic amine | 3.077 |
| Receptors and Channels: Rhodopsin family: amine receptors | 3.077 |
| Ion Channels: Neurotransmitter transporters | 1.466 |
| Receptors and Channels: Related to neurotransmitter transporters | 1.466 |
| ##### CC58 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 4.254 |
| Receptors and Channels: Rhodopsin family: amine receptors | 4.254 |
| Ion Channels: Glycine | 2.699 |
| G Protein-Coupled Receptors: Neuropeptide | 2.654 |
| Receptors and Channels: Cys-loop superfamily | 2.496 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.406 |
| ##### CC59 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 1.439 |
| Receptors and Channels: Rhodopsin family: amine receptors | 1.439 |
| ##### CC60 ##### | |
| Ion Channels: Na+ channel, SCN beta | 4.223 |

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| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 4.201 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.539 |
| Receptors and Channels: Voltage-gated cation channels | 3.104 |
| Ion Channels: Epithelial sodium channel (SCNN) | 2.037 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.795 |
| ##### CC61 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 7.16 |
| Receptors and Channels: Voltage-gated cation channels | 4.615 |
| Ion Channels: Na+ channel, SCN beta | 3.753 |
| Receptors and Channels: Epithelial and related Na+ channels | 2.938 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.755 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.504 |
| ##### CC62 ##### | |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 4.867 |
| GTP-Binding Proteins: Rho Family | 2.194 |
| Protein Kinases: PDGFR family | 1.346 |
| ##### CC63 ##### | |
| Chaperones and folding catalysts: Peptidyl prolyl isomerase | 41.706 |
| Enzymes: cis-trans-Isomerases | 41.706 |
| Spliceosome: Other components | 4.64 |
| G Protein-Coupled Receptors: Biogenic amine | 2.161 |
| Receptors and Channels: Rhodopsin family: amine receptors | 2.161 |
| ##### CC64 ##### | |
| Cytoskeleton proteins: Microtubules | 9.975 |
| Enzyme-linked Receptors, Cytokine Receptors: RTK class III (PDGF recepto | 5.339 |
| Protein Kinases: PDGFR family | 1.559 |
| Enzymes: Other isomerases | 1.406 |
| ##### CC65 ##### | |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 15.413 |
| G Protein-Coupled Receptors: Biogenic amine | 2.736 |
| Receptors and Channels: Rhodopsin family: amine receptors | 2.736 |
| Cytochrome P450: CYP8 family | 2.029 |
| Cytochrome P450: CYP7 family | 2.029 |
| Cytochrome P450: CYP4 family | 2.029 |
| Cytochrome P450: CYP27 family | 2.029 |
| Enzymes: Carbon-oxygen lyases | 1.311 |
| ##### CC66 ##### | |
| Ion Channels: GABA-A | 30.842 |
| Receptors and Channels: Cys-loop superfamily | 23.47 |
| ##### CC67 ##### | |

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| Chaperones and folding catalysts: Peptidyl prolyl isomerase | 44.339 |
| Enzymes: cis-trans-Isomerases | 44.339 |
| Spliceosome: Other components | 4.894 |
| ##### CC68 ##### | |
| Chaperones and folding catalysts: Peptidyl prolyl isomerase | 42.074 |
| Enzymes: cis-trans-Isomerases | 42.074 |
| Spliceosome: Other components | 4.689 |
| ##### CC69 ##### | |
| Receptors and Channels: Voltage-gated cation channels | 7.123 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.339 |
| Ion Channels: Na+ channel, SCN beta | 3.811 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 3.441 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.003 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.795 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.542 |
| ##### CC70 ##### | |
| Enzyme-linked Receptors, Cytokine Receptors: RTK class III (PDGF recepto | 5.436 |
| Receptors and Channels: Subfamily 3: estrogen like | 4.412 |
| Nuclear Receptors: | 2.452 |
| G Protein-Coupled Receptors: Neuropeptide | 2.426 |
| Transcription Factors: Zinc finger | 2.426 |
| Nuclear Receptors: | 1.795 |
| Protein Kinases: PDGFR family | 1.603 |
| Receptors and Channels: Rhodopsin family: peptide receptors | 1.406 |
| ##### CC71 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 4.309 |
| Enzymes: Acting on single donors with O2 as oxidant and incorporation of oxygen into the substrate (oxygenases). | 4.076 |
| Ion Channels: Na+ channel, SCN beta | 3.248 |
| Receptors and Channels: Voltage-gated cation channels | 1.543 |
| G Protein-Coupled Receptors: Neuropeptide | 1.494 |
| ##### CC72 ##### | |
| none | |
| ##### CC73 ##### | |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 5.68 |
| Ion Channels: Na+ channel, SCN beta | 4 |
| Receptors and Channels: Voltage-gated cation channels | 3.459 |
| Receptors and Channels: Epithelial and related Na+ channels | 3.248 |
| Ion Channels: Epithelial sodium channel (SCNN) | 1.905 |
| Ion Channels: Acid-sensing ion channel (ASIC) | 1.653 |
| ##### CC74 ##### | |

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| Transcription Factors: Zinc finger | 7.392 |
| Nuclear Receptors: | 3.461 |
| Receptors and Channels: Subfamily 3: estrogen like | 3.388 |
| G Protein-Coupled Receptors: Neuropeptide | 3.003 |
| Nuclear Receptors: | 2.963 |
| Ion Channels: Acetylcholine (nicotinic) | 2.688 |
| Receptors and Channels: Subfamily 2: hepatocyte nuclear factor 4 like | 2.145 |
| Receptors and Channels: Rhodopsin family: peptide receptors | 1.598 |
| Nuclear Receptors: | 1.577 |
| ##### CC75 ##### | |
| Ion Channels: GABA-A | 16.504 |
| Receptors and Channels: Cys-loop superfamily | 10.438 |
| Receptors and Channels: Related to voltage-gated cation channels | 10.184 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 6.324 |
| Receptors and Channels: Voltage-gated cation channels | 4.867 |
| Ion Channels: Ryanodine receptor (RYR) | 2.827 |
| Ion Channels: Ca2+ channel, CACN gamma | 2.305 |
| Ion Channels: Ca2+ channel, CACN beta | 2.305 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.559 |
| Ion Channels: IP3 receptor | 1.559 |
| Ion Channels: Neurotransmitter transporters | 1.355 |
| Receptors and Channels: Related to neurotransmitter transporters | 1.355 |
| ##### CC76 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 3.136 |
| Receptors and Channels: Rhodopsin family: amine receptors | 3.136 |
| ##### CC77 ##### | |
| none | |
| ##### CC78 ##### | |
| G Protein-Coupled Receptors: Biogenic amine | 14.671 |
| Receptors and Channels: Rhodopsin family: amine receptors | 14.671 |
| ##### CC79 ##### | |
| Receptors and Channels: Voltage-gated cation channels | 15.526 |
| Receptors and Channels: Related to voltage-gated cation channels | 10.678 |
| Ion Channels: Ca2+ channel, CACN alpha-1, CaVx.x | 8.607 |
| Ion Channels: Ca2+ channel, CACN gamma | 4.305 |
| Ion Channels: Ca2+ channel, CACN beta | 4.305 |
| Ion Channels: Ryanodine receptor (RYR) | 2.981 |
| Ion Channels: Na+ channel, SCN beta | 2.981 |
| Ion Channels: Na+ channel, SCN alpha, NaV1.x | 2.52 |
| Receptors and Channels: Epithelial and related Na+ channels | 1.902 |
| Ion Channels: Transient receptor potential family, TRPP (Polycystin) | 1.653 |

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| Ion Channels: IP3 receptor | 1.653 |
| ##### CC80 ##### | |
| Enzyme-linked Receptors, Cytokine Receptors: RTK class III (PDGF receptor family) | 6.929 |
| G Protein-Coupled Receptors: Biogenic amine | 2.325 |
| Receptors and Channels: Rhodopsin family: amine receptors | 2.325 |
| Protein Kinases: PDGFR family | 2.194 |
| Enzymes: Other isomerases | 2.037 |