

## **Functional Annotation Chart**

Help and Manual

Current Gene List: condition\_specific\_gene\_list Current Background: Homo sapiens 2052 DAVID IDs

## **Options**

|       | un Using Op  | tions Create Sublist  |           |            |             |            |                     |                    |
|-------|--------------|---|-----------|------------|-------------|------------|---------------------|--------------------|
| 141   | chart recor  | ds  |           |            |             | <b>'</b>   | Downle              | oad File           |
| Subli | st Category  | Term  | RT        | Genes      | Count       | %          | P-Value             | Benjamini          |
|       | UP_TISSUE    | Erythroleukemia   | RT        |            | 978         |            | 8.1E-141            |                    |
|       |              | Cervix carcinoma  | RT        |            | 1036        |            | 2.4E-126            |                    |
|       | UP_TISSUE    | Liver Leukemic T-cell   | RT<br>RT  |            | 1054<br>592 |            | 1.7E-125<br>1.2E-91 |                    |
|       | UP_TISSUE    |   | RT        |            | 645         |            | 3.6E-40             | 3.3E-38            |
|       |              | Lymphoblast   | RT        |            | 130         |            | 4.4E-37             | 3.3E-35            |
|       | UP_TISSUE    |   | RT        |            | 151         | 7.4        | 3.3E-29             | 2.2E-27            |
|       | UP_TISSUE    | Colon carcinoma   | RT        |            | 152         | 7.4        | 1.1E-26             | 6.4E-25            |
|       | UP_TISSUE    | Lymph   | RT        |            | 167         | 8.1        | 7.9E-25             | 4.0E-23            |
|       | UP_TISSUE    |   | RT        |            | 336         |            | 9.7E-25             | 4.4E-23            |
|       | UP_TISSUE    |   | RT        |            | 352         |            | 1.3E-23             | 5.5E-22            |
|       | UP_TISSUE    | Umbilical cord blood  |           |            | 92<br>106   | 4.5<br>5.2 | 1.1E-20<br>2.9E-20  | 4.1E-19<br>1.0E-18 |
|       | _            | Cajal-Retzius cell  |           | <b>=</b>   | 71          |            | 6.4E-20             | 2.1E-18            |
|       |              | Embryonic kidney  |           |            | 136         | 6.6        | 5.4E-19             | 1.6E-17            |
|       | UP_TISSUE    | Lung  | RT        |            | 432         | 21.1       | 1.5E-18             | 4.2E-17            |
|       | UP_TISSUE    | Muscle  | RT        |            | 175         | 8.5        | 2.5E-18             | 6.5E-17            |
|       | UP_TISSUE    | ·   | RT        |            | 164         |            | 1.6E-17             | 4.0E-16            |
|       | _            | Fetal brain cortex  |           | _          | 70          |            | 1.2E-16             | 2.9E-15            |
|       |              | Bone marrow B-cell lymphoma                                     | RT<br>RT  |            | 154<br>51   | 7.5<br>2.5 | 4.4E-15<br>9.4E-15  | 1.0E-13<br>2.0E-13 |
|       | UP_TISSUE    |   | RT        |            | 113         | 5.5        | 1.5E-13             | 3.2E-12            |
|       | UP_TISSUE    |   | RT        |            | 173         | 8.4        | 5.3E-11             | 1.0E-9             |
|       | UP_TISSUE    | Eye   | RT        |            | 182         | 8.9        | 6.4E-11             | 1.2E-9             |
|       | UP_TISSUE    | B-cell  | RT        | <b>=</b>   | 71          | 3.5        | 2.4E-10             | 4.3E-9             |
|       | UP_TISSUE    | Ovarian carcinoma   | RT        |            | 52          | 2.5        | 9.3E-10             | 1.6E-8             |
|       |              | Petrous bone  | RT        | _          | 11          | 0.5        | 5.4E-8              | 7.4E-7             |
|       |              | Blood Serum  Diagnosis blood and bone marrow                    | RT        | _          | 11<br>11    | 0.5<br>0.5 | 5.4E-8<br>5.4E-8    | 7.4E-7             |
|       | UP_TISSUE    |   | RT<br>RT  |            | 11          | 0.5        | 5.4E-8              | 7.4E-7<br>7.4E-7   |
|       |              | Left maxillary second premolar                                  | RT        |            | 11          | 0.5        | 5.4E-8              | 7.4E-7             |
|       |              | Right femur   | RT        |            | 11          |            | 5.4E-8              | 7.4E-7             |
|       | UP_TISSUE    | Esophageal cancerous tissue                                     | RT        | : <b>=</b> | 11          | 0.5        | 5.4E-8              | 7.4E-7             |
|       | UP_TISSUE    | Promyelocytic leukemia  | <u>RT</u> |            | 17          |            | 2.3E-7              | 3.1E-6             |
|       |              | Dorsolateral prefrontal cortex                                  | RT        |            | 10          |            | 3.8E-7              | 4.4E-6             |
|       |              | Normal colon tissue   | RT        |            | 10          |            | 3.8E-7              | 4.4E-6             |
|       |              | Paracancerous normal esophageal tissue Primary cancerous tissue | RT<br>RT  | _          | 10<br>10    |            | 3.8E-7<br>3.8E-7    | 4.4E-6<br>4.4E-6   |
|       | UP_TISSUE    | ,   | RT        | _          | 10          |            | 3.8E-7              | 4.4E-6             |
|       |              | Cardiac muscle  | RT        |            | 11          |            | 4.6E-7              | 5.2E-6             |
|       | UP_TISSUE    | Bilateral multifocal renal oncocytoma                           | RT        | : ■        | 9           | 0.4        | 7.8E-7              | 8.3E-6             |
|       | UP_TISSUE    | Petrous portion of temporal bone                                | <u>RT</u> |            | 9           |            | 7.8E-7              | 8.3E-6             |
|       |              | Renal cell carcinoma - chromophobe - multifocal                 |           | _          | 9           |            | 7.8E-7              | 8.3E-6             |
|       |              | Dendritic cell  | RT        |            | 26          |            | 1.1E-6              | 1.1E-5             |
|       | UP_TISSUE    | Mammary carcinoma   | RT<br>RT  | _          | 11<br>31    |            | 1.1E-6<br>1.8E-6    | 1.1E-5<br>1.8E-5   |
|       |              | Urinary bladder   |           |            | 53          |            | 1.8E-6              | 1.8E-5             |
|       | UP_TISSUE    | •   |           |            | 75          |            | 2.1E-6              | 2.0E-5             |
|       | UP_TISSUE    | Brain   | RT        |            | 1019        | 49.7       | 2.4E-6              | 2.2E-5             |
|       | UP_TISSUE    | Neural arch   | RT        |            | 9           | 0.4        | 2.6E-6              | 2.3E-5             |
|       |              | Bone fragment   | RT        | _          | 9           |            | 2.6E-6              | 2.3E-5             |
|       | UP_TISSUE    | ·   |           | _          | 55          | 2.7        |                     | 2.6E-5             |
|       | UP_TISSUE    | Adrenal gland   |           | <b>-</b>   | 124<br>49   |            | 3.7E-6<br>4.9E-6    | 3.2E-5<br>4.1E-5   |
|       |              | Cheek swab  | RT        |            | 8           |            | 5.7E-6              | 4.1E-5<br>4.6E-5   |
|       | <del>-</del> | Left mandinular canine  | RT        |            | 8           |            | 5.7E-6              | 4.6E-5             |
|       | UP_TISSUE    |   | RT        |            | 7           | 0.3        | 1.1E-5              | 9.0E-5             |
|       | UP_TISSUE    | Bone  | RT        |            | 23          |            | 1.5E-5              | 1.2E-4             |
|       |              | Renal cell carcinoma - clear cell                               | RT        | _          | 8           |            | 1.7E-5              | 1.3E-4             |
|       | _            | Prostate cancer   | RT<br>DT  | <u> </u>   | 19          |            | 2.4E-5              | 1.8E-4             |
|       | UP_TISSUE    | Skeletal muscle   | RT<br>RT  | =          | 234<br>106  |            | 2.5E-5<br>3.2E-5    | 1.9E-4<br>2.3E-4   |
|       | _            | Thyroid cancer  | RT        |            | 7           |            | 4.1E-5              | 2.3E-4<br>2.9E-4   |
|       |              | Adipose tissue  | RT        | _          | 36          |            | 6.0E-5              | 4.2E-4             |
|       | UP_TISSUE    | Peripheral blood  | RT        | _          | 41          | 2.0        | 9.3E-5              | 6.5E-4             |
|       | UP_TISSUE    | Adenocarcinoma  | RT        |            | 7           | 0.3        | 1.1E-4              | 7.3E-4             |
|       | UP_TISSUE    |   | RT        | _          | 7           |            | 1.1E-4              | 7.3E-4             |
|       | _            | Renal cell carcinoma - chromophobe                              | RT        |            | 7           |            | 1.1E-4              | 7.3E-4             |
|       | _            | Right maxillary third molar                                     | RT<br>RT  | _          | 7<br>10     |            | 1.1E-4<br>1 3F-4    | 7.3E-4<br>8.2F-4   |
|       |              | Pituitary tumor Cerebellum                                      | RT<br>RT  |            | 10<br>170   | 0.5<br>8.3 | 1.3E-4<br>1.4E-4    | 8.2E-4<br>8.7E-4   |
|       | UP_TISSUE    |   |           |            | 102         | 5.0        | 1.4E-4<br>1.7E-4    | 1.1E-3             |
|       | UP_TISSUE    |   | RT        |            | 18          | 0.9        | 2.8E-4              | 1.7E-3             |
|       | UP_TISSUE    | Mesolithic bone   | RT        | _          | 6           | 0.3        | 2.8E-4              | 1.7E-3             |
|       | UP_TISSUE    |   |           | <b>=</b>   | 127         | 6.2        | 3.1E-4              | 1.9E-3             |
|       | UP_TISSUE    |   | RT        |            | 19          |            | 4.4E-4              | 2.6E-3             |
|       | _            | Lung carcinoma  | RT<br>DT  |            | 24<br>30    |            | 4.5E-4              | 2.6E-3             |
|       | UP_TISSUE    | r realitar y  | RT        | •          | 50          | 1.5        | 5.1E-4              | 3.0E-3             |

| Sublist | Category  | Term  | RT        | Genes | Count    | %          | P-Value          | Benjamin         |
|---------|-----------|---|-----------|-------|----------|------------|------------------|------------------|
|         | UP_TISSUE |   | RT        |       | 175      | 8.5        | 6.0E-4           | 3.4E-3           |
|         | UP_TISSUE |   | RT        | _     | 32       | 1.6        | 7.9E-4           | 4.5E-3           |
|         |           | Lymphocyte  | RT        | =     | 22       | 1.1        | 8.7E-4           | 4.9E-3           |
|         |           | Hypothalamus  | RT        | Ξ     | 29       | 1.4        | 1.1E-3           | 6.2E-3           |
|         | UP_TISSUE | Trachea   | RT        |       | 130      | 6.3        | 1.1E-3           | 6.3E-3           |
|         | UP_TISSUE | Leukocyte   | RT        |       | 34       | 1.7        | 1.4E-3           | 7.6E-3           |
|         | UP_TISSUE | Fibroblast  | RT        |       | 29       | 1.4        | 1.7E-3           | 9.3E-3           |
|         | UP_TISSUE | Anterior cingulate  | <u>RT</u> |       | 5        | 0.2        | 1.8E-3           | 9.3E-3           |
|         | UP_TISSUE | $\label{eq:decomposition} \mbox{Diagnosis and follow-up blood and bone marrow}$ | RT        |       | 5        | 0.2        | 1.8E-3           | 9.3E-3           |
|         | UP_TISSUE | Renal cell carcinoma - papillary type 1   | <u>RT</u> |       | 5        | 0.2        | 1.8E-3           | 9.3E-3           |
|         | UP_TISSUE | Left mandibular third molar   | RT        | _     | 5        | 0.2        | 1.8E-3           | 9.3E-3           |
|         | UP_TISSUE | T-cell lymphoma   | <u>RT</u> | _     | 8        |            | 2.1E-3           | 1.0E-2           |
|         | UP_TISSUE |   | RT        | _     | 18       |            | 2.1E-3           | 1.0E-2           |
|         | UP_TISSUE |   | RT        | _     | 30       |            | 2.4E-3           | 1.2E-2           |
|         |           | Dermoid cancer  | RT        | _     | 9        |            | 3.1E-3           | 1.5E-2           |
|         |           | Mammary cancer  | RT        | Ξ     | 23       |            | 3.1E-3           | 1.5E-2           |
|         |           | Coronary artery   | RT        |       | 15<br>97 | 0.7<br>4.7 | 3.5E-3<br>3.7E-3 | 1.7E-2           |
|         | UP_TISSUE | Synovial membrane tissue  | RT<br>RT  |       | 26       | 1.3        | 3.8E-3           | 1.7E-2<br>1.8E-2 |
|         |           | Hair follicle dermal papilla  | RT        | _     | 10       |            | 3.9E-3           | 1.8E-2           |
|         |           | Keratinocyte  | RT        | _     | 26       |            | 7.0E-3           | 3.2E-2           |
|         | UP_TISSUE | ·   | RT        | =     | 10       |            | 7.7E-3           | 3.5E-2           |
|         |           | Whole blood   | RT        | _     | 9        | 0.4        |                  | 4.7E-2           |
|         | UP_TISSUE |   | RT        | _     | 4        | 0.2        | 1.1E-2           | 4.7E-2           |
|         |           | BHD-related renal tumor - hybrid  | RT        | _     | 4        | 0.2        | 1.1E-2           | 4.7E-2           |
|         | UP_TISSUE | Left fibula   | RT        |       | 4        | 0.2        | 1.1E-2           | 4.7E-2           |
|         | UP_TISSUE | BHD-related renal tumor - oncocytoma  | RT        |       | 4        | 0.2        | 1.1E-2           | 4.7E-2           |
|         | UP_TISSUE | Left mandibular second deciduous molar  | RT        |       | 4        | 0.2        | 1.1E-2           | 4.7E-2           |
|         | UP_TISSUE | HLRCC-derived sample - FH mutation  | RT        |       | 4        | 0.2        | 1.1E-2           | 4.7E-2           |
|         | UP_TISSUE | Follow-up bone marrow   | <u>RT</u> |       | 4        | 0.2        | 1.1E-2           | 4.7E-2           |
|         | UP_TISSUE | Distant normal tissue   | <u>RT</u> |       | 4        | 0.2        | 1.1E-2           | 4.7E-2           |
|         | UP_TISSUE | Spleen  | <u>RT</u> |       | 121      | 5.9        | 1.3E-2           | 5.4E-2           |
|         | UP_TISSUE | Human small intestine   | <u>RT</u> |       | 12       | 0.6        | 1.4E-2           | 5.5E-2           |
|         |           | Umbilical vein endothelial cell   | RT        |       | 12       | 0.6        | 1.6E-2           | 6.4E-2           |
|         | UP_TISSUE |   | RT        | Ξ     | 19       | 0.9        | 1.7E-2           | 6.6E-2           |
|         |           | Colon adenocarcinoma  | RT        |       | 17       | 0.8        | 1.8E-2           | 7.1E-2           |
|         |           | Cervix adenocarcinoma   | RT        |       | 6        | 0.3        | 1.9E-2           | 7.4E-2           |
|         |           | Synovial cell Peripheral blood lymphocyte                                       | RT<br>RT  |       | 11<br>9  | 0.5        | 1.9E-2<br>2.0E-2 | 7.5E-2<br>7.8E-2 |
|         |           | Para-cancerous normal tissue  | RT        | _     | 4        |            | 2.1E-2           | 7.9E-2           |
|         | UP_TISSUE |   | RT        | _     | 4        | 0.2        |                  | 7.9E-2           |
|         |           | Erythrocyte   | RT        |       | 8        | 0.4        |                  | 9.0E-2           |
|         |           | Subthalamic nucleus   | RT        | _     | 23       | 1.1        |                  | 9.3E-2           |
|         |           | Endometrium   | RT        |       | 19       | 0.9        |                  | 9.9E-2           |
|         | UP_TISSUE | Osteosarcoma  | RT        |       | 11       | 0.5        |                  | 1.1E-1           |
|         | UP_TISSUE | Fetal liver   | <u>RT</u> | _     | 36       | 1.8        | 3.0E-2           | 1.1E-1           |
|         | UP_TISSUE | Follow-up blood   | RT        |       | 3        | 0.1        | 3.4E-2           | 1.2E-1           |
|         | UP_TISSUE | BHD-realted renal tumor - chromophobe   | RT        | i     | 3        | 0.1        | 3.4E-2           | 1.2E-1           |
|         | UP_TISSUE | Primary B-Cells   | <u>RT</u> |       | 6        | 0.3        | 6.1E-2           | 2.1E-1           |
|         | UP_TISSUE | BHD-related renal tumor - poorly differentiated                                 | <u>RT</u> | i     | 3        | 0.1        | 6.3E-2           | 2.1E-1           |
|         | UP_TISSUE | Orbital frontal cortex  | <u>RT</u> | •     | 3        | 0.1        | 6.3E-2           | 2.1E-1           |
|         | UP_TISSUE | Left mandibular canine  | <u>RT</u> | i     | 3        | 0.1        | 6.3E-2           | 2.1E-1           |
|         | UP_TISSUE | ·   | <u>RT</u> |       | 3        |            | 6.3E-2           | 2.1E-1           |
|         |           | Nucleus accumbens   | RT        |       | 3        |            | 6.3E-2           | 2.1E-1           |
|         |           | Diagnosis bone marrow   | RT        |       | 3        |            | 6.3E-2           | 2.1E-1           |
|         |           | Myeloid leukemia cell   | RT<br>DT  | _     | 5        |            | 7.4E-2           | 2.5E-1           |
|         |           | Uterine endothelium   | RT<br>DT  |       | 9        |            | 7.6E-2<br>8.4E-2 | 2.5E-1           |
|         | UP_TISSUE | Human lung  | RT<br>PT  | _     | 14<br>6  | 0.7        | 8.4E-2<br>8.7E-2 | 2.8E-1<br>2.9E-1 |
|         |           | Renal proximal tubule   | RT<br>RT  |       | 3        | 0.3        | 9.7E-2           | 3.1E-1           |
|         |           | Lymphoblastoma  | RT        |       | 3        | 0.1        |                  | 3.1E-1           |
|         | UP_TISSUE |   | RT        | _     | 3        | 0.1        |                  | 3.1E-1           |
|         |           | Renal cell carcinoma  | RT        | _     | 12       |            | 9.7E-2           | 3.1E-1           |
| _       |           |   | _         |       |          |            |                  |                  |

30 gene(s) from your list are not in the output.

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