CellChat

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B cell | Dendritic | Endothelial | Fibroblast | HNSCC | Macrophage | Mast | myocyte | T cell |
| B cell | 1.131125 | 0.832101 | 0.663505 | 0.207437 | 0.620262 | 2.646843 | 0.737312 | 0.149461 | 2.359863 |
| Dendritic | 0.970638 | 1.888666 | 1.449302 | 0.743887 | 0.890565 | 6.090297 | 2.233726 | 0.384661 | 3.27766 |
| Endothelial | 3.302886 | 2.850217 | 5.175796 | 4.649209 | 8.406236 | 8.313851 | 4.43938 | 2.375477 | 5.218549 |
| Fibroblast | 4.74318 | 3.304452 | 4.110342 | 5.819874 | 11.92183 | 7.225954 | 4.476934 | 2.930266 | 5.571322 |
| HNSCC | 2.194264 | 1.936604 | 3.764253 | 3.224924 | 6.392622 | 4.197175 | 2.688423 | 1.441173 | 3.401027 |
| Macrophage | 1.801635 | 2.001062 | 2.563442 | 1.470175 | 1.898224 | 8.833562 | 3.119727 | 0.589599 | 3.753441 |
| Mast | 0.65947 | 0.938054 | 1.340104 | 0.748613 | 1.039457 | 3.845762 | 1.388018 | 0.360799 | 2.702455 |
| myocyte | 0.557575 | 0.569595 | 1.086836 | 0.590934 | 0.57057 | 1.288312 | 0.269277 | 0.433945 | 1.340541 |
| T cell | 0.698895 | 1.080199 | 1.204187 | 0.230254 | 0.555986 | 2.81048 | 0.767007 | 0.306713 | 2.183926 |

CellEnBoost\_p

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | HNSCC | T cell | Myocyte | Mast | Macrophage | Fibroblast | Endothelial | B cell | Dendritic |
| HNSCC | 0.706182 | 0.323324 | 0.237714 | 0.334516 | 0.932777 | 0.537662 | 0.830279 | 0.209161 | 0.424195 |
| T cell | 0.305551 | 0.098208 | 0.029888 | 0.105139 | 0.452793 | 0.203799 | 0.378961 | 0.020278 | 0.154762 |
| Myocyte | 0.285071 | 0.067626 | 0.017034 | 0.081932 | 0.408518 | 0.185553 | 0.348749 | 0 | 0.122721 |
| Mast | 0.414703 | 0.157039 | 0.089179 | 0.169879 | 0.587135 | 0.298614 | 0.503016 | 0.069792 | 0.222163 |
| Macrophage | 0.7497 | 0.36201 | 0.265313 | 0.370683 | 1 | 0.57516 | 0.878013 | 0.237217 | 0.464246 |
| Fibroblast | 0.720491 | 0.306978 | 0.23928 | 0.333036 | 0.915525 | 0.542303 | 0.834482 | 0.197975 | 0.403131 |
| Endothelial | 0.696908 | 0.305222 | 0.231566 | 0.326838 | 0.901549 | 0.524681 | 0.812052 | 0.195203 | 0.400117 |
| B cell | 0.283157 | 0.069921 | 0.018654 | 0.08152 | 0.407502 | 0.188071 | 0.350614 | 0.00207 | 0.120919 |
| Dendritic | 0.418362 | 0.163184 | 0.090295 | 0.171531 | 0.589493 | 0.298751 | 0.50596 | 0.074497 | 0.232607 |

CellEnBoost\_s

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | HNSCC | T cell | Myocyte | Mast | Macrophage | Fibroblast | Endothelial | B cell | Dendritic |
| HNSCC | 1 | 0.344149 | 0.357565 | 0.295198 | 0.627701 | 0.77029 | 0.765221 | 0.217932 | 0.274259 |
| T cell | 0.266989 | 0.075728 | 0.069056 | 0.051148 | 0.163157 | 0.197873 | 0.19506 | 0.029053 | 0.048946 |
| Myocyte | 0.199908 | 0.037608 | 0.043667 | 0.028547 | 0.103952 | 0.139905 | 0.142915 | 0.007692 | 0.023428 |
| Mast | 0.198977 | 0.041938 | 0.044134 | 0.029643 | 0.112146 | 0.143281 | 0.14294 | 0.009011 | 0.025429 |
| Macrophage | 0.407064 | 0.130677 | 0.120361 | 0.096161 | 0.250569 | 0.303966 | 0.295721 | 0.064076 | 0.092094 |
| Fibroblast | 0.730474 | 0.231372 | 0.254407 | 0.20641 | 0.434151 | 0.55464 | 0.567771 | 0.144115 | 0.188996 |
| Endothelial | 0.537299 | 0.164291 | 0.179113 | 0.145226 | 0.319149 | 0.405553 | 0.412525 | 0.095985 | 0.132203 |
| B cell | 0.169254 | 0.02235 | 0.032265 | 0.017599 | 0.085642 | 0.121286 | 0.11975 | 0 | 0.011002 |
| Dendritic | 0.261866 | 0.065546 | 0.068219 | 0.050999 | 0.151071 | 0.192305 | 0.192082 | 0.025635 | 0.045201 |

CellEnBoost\_c

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| name | HNSCC | T cell | Myocyte | Mast | Macrophage | Fibroblast | Endothelial | B cell | Dendritic |
| HNSCC | 1 | 0.462047 | 0.369262 | 0.507683 | 0.877913 | 0.631011 | 0.809952 | 0.292654 | 0.608728 |
| T cell | 0.382032 | 0.111886 | 0.055283 | 0.132666 | 0.327895 | 0.192344 | 0.285619 | 0.019191 | 0.188764 |
| Myocyte | 0.405598 | 0.119895 | 0.064981 | 0.144998 | 0.344335 | 0.206064 | 0.303476 | 0.025821 | 0.198767 |
| Mast | 0.521656 | 0.192346 | 0.126994 | 0.220254 | 0.455546 | 0.29244 | 0.405485 | 0.08229 | 0.284789 |
| Macrophage | 0.830222 | 0.377574 | 0.286413 | 0.415067 | 0.737894 | 0.513306 | 0.669331 | 0.22477 | 0.504229 |
| Fibroblast | 0.776702 | 0.324864 | 0.252021 | 0.36565 | 0.668065 | 0.467411 | 0.616412 | 0.186475 | 0.445489 |
| Endothelial | 0.805114 | 0.345288 | 0.269396 | 0.386181 | 0.697275 | 0.489157 | 0.641926 | 0.202426 | 0.469763 |
| B cell | 0.346635 | 0.086292 | 0.035885 | 0.108478 | 0.29081 | 0.165298 | 0.253568 | 0 | 0.158507 |
| Dendritic | 0.566834 | 0.219846 | 0.150115 | 0.248029 | 0.495931 | 0.324414 | 0.443319 | 0.102672 | 0.318091 |

CellComNet

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| rowname | B cells | fibroblasts | HNSCC cancer cells | myocytes | macrophages | endothelial cells | T cells | dendritic cells | mast cells |
| B cells | 0.004756 | 0.162117 | 0.245008 | 0.011265 | 0.321423 | 0.330978 | 0.077688 | 0.215917 | 0.257337 |
| fibroblasts | 0.162413 | 0.456804 | 0.664245 | 0.202942 | 0.817244 | 0.889325 | 0.292932 | 0.348988 | 0.36515 |
| HNSCC cancer cells | 0.149915 | 0.44663 | 0.626461 | 0.187084 | 0.723984 | 0.783571 | 0.277979 | 0.512092 | 0.377725 |
| myocytes | 0 | 0.159548 | 0.26757 | 0.017259 | 0.358882 | 0.403168 | 0.07816 | 0.156888 | 0.096885 |
| macrophages | 0.195681 | 0.467329 | 0.66218 | 0.220792 | 0.903322 | 0.949176 | 0.350604 | 1 | 0.912594 |
| endothelial cells | 0.157135 | 0.449401 | 0.648801 | 0.200733 | 0.847775 | 0.897375 | 0.297846 | 0.723257 | 0.533257 |
| T cells | 0.036474 | 0.181014 | 0.280226 | 0.030941 | 0.383342 | 0.357445 | 0.124562 | 0.23909 | 0.193799 |
| dendritic cells | 0.064628 | 0.244274 | 0.360603 | 0.067708 | 0.486446 | 0.49147 | 0.172417 | 0.900807 | 0.29404 |
| mast cells | 0.060191 | 0.249471 | 0.356674 | 0.064802 | 0.477372 | 0.45627 | 0.157063 | 0.277618 | 0.837788 |

iTalk

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| --- | --- | --- |
| L | R | S |
| T cell | T cell | 452.1086 |
| Dendritic | T cell | 575.7105 |
| Mast | T cell | 454.6679 |
| Macro | T cell | 775.7333 |
| Endo | T cell | 768.4561 |
| B cell | T cell | 432.3119 |
| T cell | Dendritic | 427.4036 |
| Dendritic | Dendritic | 504.4578 |
| Fibroblast | T cell | 803.2524 |
| Mast | Dendritic | 424.9398 |
| Macro | Dendritic | 741.5436 |
| Endo | Dendritic | 779.1368 |
| B cell | Dendritic | 388.223 |
| cancer cell | T cell | 612.484 |
| T cell | Macro | 729.951 |
| Dendritic | Macro | 826.9797 |
| T cell | Endo | 506.0893 |
| Fibroblast | Dendritic | 802.7019 |
| Dendritic | Endo | 618.3998 |
| Mast | Macro | 816.6348 |
| Endo | Mast | 657.1958 |
| Macro | Macro | 1303.618 |
| Mast | Endo | 593.3338 |
| myocyte | T cell | 387.2697 |
| Endo | Macro | 1330.781 |
| Fibroblast | Mast | 717.6076 |
| Macro | Endo | 976.9517 |
| B cell | Macro | 687.5592 |
| Endo | Endo | 1256.852 |
| B cell | Endo | 472.9048 |
| cancer cell | Dendritic | 630.4632 |
| Mast | Mast | 340.2762 |
| Fibroblast | Macro | 1459.152 |
| Fibroblast | myocyte | 716.0655 |
| T cell | cancer cell | 449.3169 |
| Fibroblast | Endo | 1454.767 |
| Dendritic | cancer cell | 545.4595 |
| Fibroblast | Fibroblast | 1264.459 |
| Macro | Mast | 655.9927 |
| myocyte | Dendritic | 400.7789 |
| Mast | cancer cell | 534.5207 |
| Macro | cancer cell | 978.6153 |
| cancer cell | Mast | 559.2484 |
| cancer cell | Macro | 1170.471 |
| Endo | cancer cell | 1134.255 |
| Dendritic | Mast | 393.1075 |
| B cell | cancer cell | 421.6661 |
| cancer cell | Endo | 1168.813 |
| Fibroblast | cancer cell | 1335.304 |
| myocyte | Macro | 711.3876 |
| Mast | myocyte | 384.7581 |
| myocyte | Mast | 292.2825 |
| myocyte | Endo | 605.4121 |
| Mast | Fibroblast | 523.774 |
| T cell | Mast | 325.2582 |
| Endo | myocyte | 622.9483 |
| cancer cell | cancer cell | 1158.883 |
| T cell | myocyte | 360.8075 |
| T cell | Fibroblast | 468.9056 |
| Dendritic | myocyte | 380.1618 |
| Dendritic | Fibroblast | 508.3608 |
| Endo | Fibroblast | 1017.028 |
| cancer cell | Fibroblast | 981.4418 |
| Endo | B cell | 560.0555 |
| Macro | B cell | 562.6785 |
| Dendritic | B cell | 374.3761 |
| B cell | Mast | 313.1556 |
| Macro | myocyte | 602.9699 |
| B cell | B cell | 298.4112 |
| myocyte | cancer cell | 596.6164 |
| Macro | Fibroblast | 909.3166 |
| myocyte | myocyte | 359.2826 |
| B cell | myocyte | 312.891 |
| T cell | B cell | 323.8772 |
| B cell | Fibroblast | 415.3835 |
| Mast | B cell | 316.2055 |
| myocyte | Fibroblast | 534.469 |
| Fibroblast | B cell | 636.0009 |
| cancer cell | B cell | 468.0599 |
| cancer cell | myocyte | 598.5072 |
| myocyte | B cell | 284.3255 |

LIANA

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| --- | --- | --- |
| sender | receptor | score |
| Mast cells | Endothelial cells | 75255.7 |
| Macrophages | Macrophages | 682716.3 |
| Macrophages | B cells | 107180.9 |
| Mast cells | HNSCC cells | 37294 |
| Fibroblasts | B cells | 218383 |
| Macrophages | Endothelial cells | 431453.8 |
| Endothelial cells | Endothelial cells | 230192.6 |
| Mast cells | Macrophages | 101268.5 |
| Macrophages | Mast cells | 305121.9 |
| Macrophages | T cells | 466246.7 |
| Fibroblasts | Macrophages | 1080938 |
| HNSCC cells | Endothelial cells | 663751.1 |
| myocytes | myocytes | 51531.7 |
| Endothelial cells | Dendritic cells | 69459.2 |
| Fibroblasts | HNSCC cells | 1115987 |
| Fibroblasts | Endothelial cells | 1413507 |
| Mast cells | Dendritic cells | 54262.3 |
| Macrophages | HNSCC cells | 412757.3 |
| Fibroblasts | Fibroblasts | 1304568 |
| myocytes | Endothelial cells | 253196.3 |
| HNSCC cells | Macrophages | 563588.2 |
| B cells | Endothelial cells | 128973.5 |
| Dendritic cells | Dendritic cells | 16822.3 |
| Endothelial cells | Mast cells | 58472.1 |
| Fibroblasts | Mast cells | 339521.4 |
| Endothelial cells | Macrophages | 219711.2 |
| Dendritic cells | T cells | 154976 |
| Fibroblasts | T cells | 464341.9 |
| Mast cells | Fibroblasts | 37407.9 |
| Fibroblasts | Dendritic cells | 239969.9 |
| myocytes | Macrophages | 162569.4 |
| Macrophages | Dendritic cells | 243548.6 |
| B cells | Mast cells | 58009.4 |
| Macrophages | Fibroblasts | 501627.1 |
| Fibroblasts | myocytes | 367926.4 |
| HNSCC cells | Mast cells | 220857.7 |
| Endothelial cells | Fibroblasts | 706072.7 |
| Dendritic cells | B cells | 25357.6 |
| B cells | Macrophages | 277021.7 |
| T cells | Dendritic cells | 21923.1 |
| Mast cells | Mast cells | 42468.8 |
| Dendritic cells | Endothelial cells | 53843.2 |
| T cells | T cells | 77064.5 |
| Endothelial cells | HNSCC cells | 447467.1 |
| HNSCC cells | Fibroblasts | 527655 |
| HNSCC cells | HNSCC cells | 416379.7 |
| Endothelial cells | T cells | 106134.6 |
| Dendritic cells | Macrophages | 131648.5 |
| myocytes | Fibroblasts | 162300.9 |
| T cells | Endothelial cells | 53026.9 |
| T cells | Macrophages | 111248.3 |
| T cells | HNSCC cells | 20050.8 |
| HNSCC cells | B cells | 109941.9 |
| HNSCC cells | myocytes | 179192.2 |
| Endothelial cells | B cells | 16251.1 |
| B cells | B cells | 24563.7 |
| myocytes | HNSCC cells | 109898 |
| Mast cells | T cells | 91507.8 |
| myocytes | Dendritic cells | 38223.2 |
| HNSCC cells | T cells | 215358.1 |
| Macrophages | myocytes | 128188.8 |
| Mast cells | myocytes | 19374.9 |
| Dendritic cells | Mast cells | 27340.6 |
| myocytes | Mast cells | 55123 |
| B cells | T cells | 145715.6 |
| HNSCC cells | Dendritic cells | 156989.5 |
| Mast cells | B cells | 23378.7 |
| Endothelial cells | myocytes | 22577.4 |
| B cells | Fibroblasts | 85390 |
| B cells | HNSCC cells | 95345.1 |
| B cells | myocytes | 42945.4 |
| Dendritic cells | myocytes | 11123.9 |
| B cells | Dendritic cells | 49716.5 |
| myocytes | B cells | 30158.9 |
| T cells | B cells | 3275.7 |
| T cells | myocytes | 18195.3 |
| myocytes | T cells | 66383.4 |
| Dendritic cells | Fibroblasts | 8106.6 |
| T cells | Mast cells | 13323.3 |
| T cells | Fibroblasts | 10755.2 |
| Dendritic cells | HNSCC cells | 4264.5 |