

Supplementary Materials – Table 1

Bioinformatic analyses reveal the prognostic significance and potential role of ankyrin 3 (*ANK3*) in kidney renal clear cell carcinoma

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Supplementary Table 1. List of mutated genes that were significantly enriched in kidney renal clear cell carcinoma patients with *ANK3* mutations (cBioPortal database)

No.	Gene	Cytoband	Altered group	Unaltered group	Log ratio	p-value	q-value	Enriched in
1	<i>MCRS1</i>	12q13.12	5 (13.89%)	0 (0.00%)	>10	6.26E-09	1.30E-04	Altered group
2	<i>SDAD1</i>	4q21.1	6 (16.67%)	10 (0.69%)	4.6	8.81E-07	8.66E-03	Altered group
3	<i>TTN</i>	2q31.2	17 (47.22%)	195 (13.44%)	1.81	1.59E-06	8.66E-03	Altered group
4	<i>NFAT5</i>	16q22.1	6 (16.67%)	12 (0.83%)	4.33	1.97E-06	8.66E-03	Altered group
5	<i>PCLO</i>	7q21.11	9 (25.00%)	44 (3.03%)	3.04	2.09E-06	8.66E-03	Altered group
6	<i>AJUBA</i>	14q11.2	5 (13.89%)	6 (0.41%)	5.07	2.60E-06	8.99E-03	Altered group
7	<i>NFASC</i>	1q32.1	7 (19.44%)	23 (1.59%)	3.62	3.63E-06	9.59E-03	Altered group
8	<i>MSH6</i>	2p16.3	5 (13.89%)	7 (0.48%)	4.85	4.39E-06	9.59E-03	Altered group
9	<i>HOXA9</i>	7p15.2	3 (11.54%)	0 (0.00%)	>10	4.85E-06	9.59E-03	Altered group
10	<i>SLC7A6</i>	16q22.1	3 (11.54%)	0 (0.00%)	>10	4.85E-06	9.59E-03	Altered group
11	<i>TDRD1</i>	10q25.3	5 (13.89%)	1 (0.19%)	6.17	5.09E-06	9.59E-03	Altered group
12	<i>PPP4R3A</i>	14q32.12	5 (13.89%)	9 (0.62%)	4.48	1.07E-05	1.08E-02	Altered group
13	<i>AMER3</i>	2q21.1	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
14	<i>BAAT</i>	9q31.1	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
15	<i>CIZ1</i>	9q34.11	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
16	<i>DUSP29</i>	10q22.2	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
17	<i>GFOD1</i>	6p24.1-p23	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
18	<i>HCAR2</i>	12q24.31	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
19	<i>HLA-DRA</i>	6p21.32	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
20	<i>LYSMD4</i>	15q26.3	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
21	<i>MAPK13</i>	6p21.31	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
22	<i>METTL25</i>	12q21.31	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
23	<i>MRPL30</i>	2q11.2	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
24	<i>PLPP3</i>	1p32.2	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
25	<i>PRPH</i>	12q13.12	3 (8.33%)	0 (0.00%)	>10	1.31E-05	1.08E-02	Altered group
26	<i>ANKRD11</i>	16q24.3	5 (13.89%)	10 (0.69%)	4.33	1.58E-05	1.17E-02	Altered group
27	<i>NLRC5</i>	16q13	5 (13.89%)	10 (0.69%)	4.33	1.58E-05	1.17E-02	Altered group
28	<i>ZFYVE27</i>	10q24.2	5 (13.89%)	10 (0.69%)	4.33	1.58E-05	1.17E-02	Altered group
29	<i>SGO2</i>	2q33.1	6 (16.67%)	19 (1.31%)	3.67	1.66E-05	1.19E-02	Altered group
30	<i>SLC9B2</i>	4q24	4 (11.11%)	4 (0.28%)	5.33	1.90E-05	1.31E-02	Altered group
31	<i>WWP2</i>	16q22.1	4 (15.38%)	4 (0.42%)	5.19	2.57E-05	1.72E-02	Altered group
32	<i>TMEM81</i>	1q32.1	4 (11.11%)	5 (0.34%)	5.01	3.35E-05	2.17E-02	Altered group
33	<i>FAT3</i>	11q14.3	7 (19.44%)	35 (2.41%)	3.01	3.90E-05	2.45E-02	Altered group
34	<i>BLTP3A</i>	6p21.31	5 (13.89%)	13 (0.90%)	3.95	4.27E-05	2.53E-02	Altered group
35	<i>TEC</i>	4p12-p11	5 (13.89%)	13 (0.90%)	3.95	4.27E-05	2.53E-02	Altered group

36	<i>NPR2</i>	9p13.3	4 (11.11%)	3 (0.32%)	5.14	4.83E-05	2.78E-02	Altered group
37	<i>HECW2</i>	2q32.3	6 (16.67%)	24 (1.65%)	3.33	5.11E-05	2.85E-02	Altered group
38	<i>NCAPH2</i>	22q13.33	4 (11.11%)	6 (0.41%)	4.75	5.49E-05	2.85E-02	Altered group
39	<i>UNC13B</i>	9p13.3	4 (11.11%)	6 (0.41%)	4.75	5.49E-05	2.85E-02	Altered group
40	<i>PDE4C</i>	19p13.11	5 (13.89%)	14 (0.96%)	3.85	5.69E-05	2.85E-02	Altered group
41	<i>REV3L</i>	6q21	5 (19.23%)	21 (1.45%)	3.73	5.78E-05	2.85E-02	Altered group
42	<i>TNC</i>	9q33.1	5 (19.23%)	21 (1.45%)	3.73	5.78E-05	2.85E-02	Altered group
43	<i>CELSR2</i>	1p13.3	5 (13.89%)	15 (1.03%)	3.75	7.46E-05	3.43E-02	Altered group
44	<i>PLEKHA6</i>	1q32.1	5 (13.89%)	15 (1.03%)	3.75	7.46E-05	3.43E-02	Altered group
45	<i>SPAM1</i>	7q31	5 (13.89%)	15 (1.03%)	3.75	7.46E-05	3.43E-02	Altered group
46	<i>ATP8B1</i>	18q21.31	4 (11.11%)	7 (0.48%)	4.53	8.48E-05	3.66E-02	Altered group
47	<i>BIN2</i>	12q13.13	4 (11.11%)	7 (0.48%)	4.53	8.48E-05	3.66E-02	Altered group
48	<i>POLG</i>	15q26.1	4 (11.11%)	7 (0.48%)	4.53	8.48E-05	3.66E-02	Altered group
49	<i>MYH8</i>	17p13.1	4 (15.38%)	11 (0.76%)	4.34	9.05E-05	3.83E-02	Altered group
50	<i>ZBED4</i>	22q13.33	3 (11.54%)	3 (0.21%)	5.8	9.37E-05	3.88E-02	Altered group
51	<i>DNAJB11</i>	3q27.3	5 (13.89%)	16 (1.10%)	3.65	9.62E-05	3.91E-02	Altered group
52	<i>KIRREL1</i>	1q23.1	5 (13.89%)	17 (1.17%)	3.57	1.22E-04	4.53E-02	Altered group
53	<i>POLE</i>	12q24.33	5 (13.89%)	17 (1.17%)	3.57	1.22E-04	4.53E-02	Altered group
54	<i>ZNF687</i>	1q21.3	5 (13.89%)	17 (1.17%)	3.57	1.22E-04	4.53E-02	Altered group
55	<i>CASQ1</i>	1q23.2	4 (11.11%)	8 (0.55%)	4.33	1.25E-04	4.53E-02	Altered group
56	<i>TRIM51</i>	11q12.1	4 (11.11%)	8 (0.55%)	4.33	1.25E-04	4.53E-02	Altered group
57	<i>DLG5</i>	10q22.3	3 (12.50%)	2 (0.21%)	5.89	1.27E-04	4.53E-02	Altered group
58	<i>PTGFR</i>	1p31.1	3 (12.50%)	2 (0.21%)	5.89	1.27E-04	4.53E-02	Altered group
59	<i>DIO2</i>	14q31.1	4 (11.11%)	9 (0.62%)	4.16	1.78E-04	4.98E-02	Altered group
60	<i>ERBIN</i>	5q12.3	4 (11.11%)	9 (0.62%)	4.16	1.78E-04	4.98E-02	Altered group
61	<i>FLT3</i>	13q12.2	4 (11.11%)	9 (0.62%)	4.16	1.78E-04	4.98E-02	Altered group
62	<i>ZC3H13</i>	13q14.13	4 (11.11%)	9 (0.62%)	4.16	1.78E-04	4.98E-02	Altered group
63	<i>AHNAK2</i>	14q32.33	7 (19.44%)	46 (3.17%)	2.62	1.84E-04	4.98E-02	Altered group
64	<i>CES1P1</i>	16q12.2	2 (9.09%)	0 (0.00%)	>10	2.13E-04	4.98E-02	Altered group
65	<i>SLC8B1</i>	12q24.13	5 (13.89%)	13 (1.28%)	3.44	2.20E-04	4.98E-02	Altered group
66	<i>CFAP61</i>	20p11.23	4 (11.11%)	10 (0.69%)	4.01	2.44E-04	4.98E-02	Altered group
67	<i>HPS5</i>	11p15.1	4 (11.11%)	10 (0.69%)	4.01	2.44E-04	4.98E-02	Altered group
68	<i>SLC7A13</i>	8q21.3	4 (11.11%)	10 (0.69%)	4.01	2.44E-04	4.98E-02	Altered group
69	<i>COL14A1</i>	8q24.12	4 (15.38%)	15 (1.03%)	3.9	2.45E-04	4.98E-02	Altered group
70	<i>ADORA2A</i>	22q11.23	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
71	<i>ATXN2</i>	12q24.12	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
72	<i>CACNB1</i>	17q12	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
73	<i>DNM1L</i>	12p11.21	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
74	<i>DTNBP1</i>	6p22.3	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
75	<i>FAM166B</i>	9p13.3	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
76	<i>FERMT3</i>	11q13.1	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
77	<i>FMNL3</i>	12q13.12	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
78	<i>FBNP1L</i>	1p22.1	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
79	<i>GRK3</i>	22q12.1	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
80	<i>GTSE1</i>	22q13.31	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
81	<i>HUS1</i>	7p12.3	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
82	<i>INTS11</i>	1p36.33	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
83	<i>RSC1A1</i>	1p36.21	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group

84	<i>TCERG1L</i>	10q26.3	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
85	<i>TNFRSF9</i>	1p36.23	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
86	<i>TSPAN11</i>	12p11.21	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
87	<i>TULP1</i>	6p21.31	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
88	<i>UBXN10</i>	1p36.12	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
89	<i>ZGLP1</i>	19p13.2	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
90	<i>ZNF215</i>	11p15.4	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
91	<i>ZNF358</i>	19p13.2	3 (8.33%)	3 (0.21%)	5.33	2.48E-04	4.98E-02	Altered group
92	<i>LZTR1</i>	22q11.21	2 (8.33%)	0 (0.00%)	>10	2.54E-04	4.98E-02	Altered group
93	<i>RSAD2</i>	2p25.2	2 (8.33%)	0 (0.00%)	>10	2.54E-04	4.98E-02	Altered group
94	<i>FAT4</i>	4q28.1	5 (13.89%)	21 (1.45%)	3.26	2.85E-04	4.98E-02	Altered group
95	<i>SLITRK6</i>	13q31.1	5 (13.89%)	21 (1.45%)	3.26	2.85E-04	4.98E-02	Altered group
96	<i>ADA2</i>	22q11.1	3 (21.43%)	12 (0.83%)	4.7	2.96E-04	4.98E-02	Altered group
97	<i>ACVR1</i>	2q24.1	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
98	<i>BAG1</i>	9p13.3	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
99	<i>CFAP299</i>	4q21.21	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
100	<i>CLEC18A</i>	16q22.1	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
101	<i>CLEC18C</i>	16q22.1	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
102	<i>DDX19B</i>	16q22.1	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
103	<i>DIS3L</i>	15q22.31	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
104	<i>DMAPI</i>	1p34.1	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
105	<i>DPCD</i>	10q24.32	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
106	<i>DTX3</i>	12q13.3	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
107	<i>ENOSF1</i>	18p11.32	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
108	<i>EXOSC6</i>	16q22.1	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
109	<i>GLO1</i>	6p21.2	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
110	<i>GRK4</i>	4p16.3	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
111	<i>HOXC11</i>	12q13.13	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
112	<i>MAPK7</i>	17p11.2	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
113	<i>MBOAT1</i>	6p22.3	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
114	<i>METAP2</i>	12q22	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
115	<i>MPV17</i>	2p23.3	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
116	<i>NQO1</i>	16q22.1	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
117	<i>OR4L1</i>	14q11.2	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
118	<i>PDLIM1</i>	10q23.33	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
119	<i>SNAPC5</i>	15q22.31	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
120	<i>SPNS2</i>	17p13.2	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
121	<i>THTPA</i>	14q11.2	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
122	<i>TNFAIP8L3</i>	15q21.2	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
123	<i>UROD</i>	1p34.1	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group
124	<i>VIM</i>	10p13	2 (7.69%)	0 (0.00%)	>10	2.98E-04	4.98E-02	Altered group