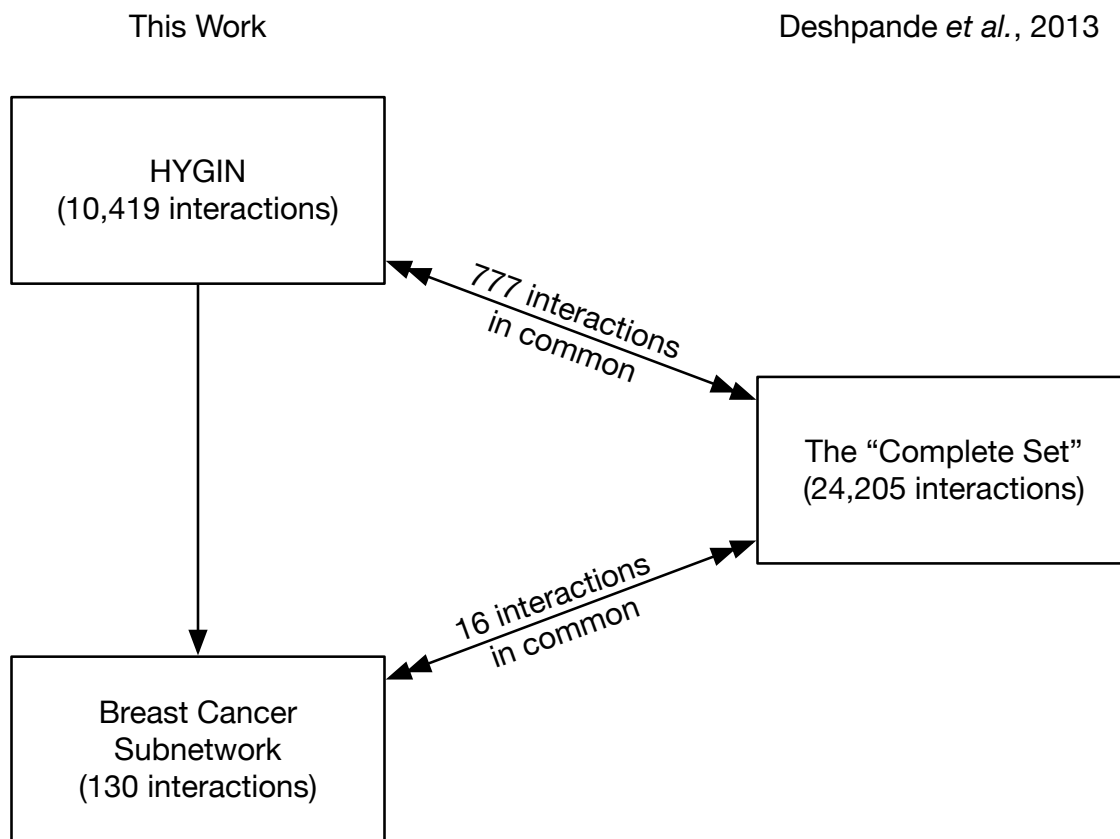


Supplementary Figure S1

Cell Cycle and Mitosis	18
Cell adhesion and communication	0 5
Chaperone and Protein Folding	12 61 0
Cytoskeleton	3 17 0 56
DDR pathways and NA metabolism	32 372 2 67 14
Developmental Process	0 6 0 1 1 17
Enzymatic or Catalytic Activity	9 49 2 25 23 94 3
Immune System process	0 19 0 7 0 18 5
Intracellular Protein Traffic	26 176 4 77 33 245 14 225 20
Ion Regulation	1 12 0 2 1 13 1 1 5
Metabolism	8 89 1 41 23 135 8 97 20 201
Miscellaneous	6 69 1 18 10 60 6 46 4 104 1 36
Mitochondrial Organization	13 52 2 27 13 123 8 52 9 101 11 83 23
Protein Modification	6 62 3 16 6 57 2 38 8 114 2 48 26 36
RNA Processing	17 117 4 36 19 201 12 49 30 126 3 78 45 53 37
Ribosomal Biogenesis and Translation	21 197 7 29 36 248 13 78 22 173 8 144 81 102 58 218
Signal transduction	6 22 1 21 4 32 6 29 2 56 1 34 14 13 11 31 47
Stress Response	0 11 0 5 2 22 1 2 6 6 0 4 3 4 4 7 10 0
Transcription and Chromatin-related	20 157 3 42 23 163 4 46 23 149 9 106 34 59 61 120 173 23 4
Transport	6 55 1 4 6 53 3 32 3 72 3 37 9 25 18 26 55 8 1 34
Unknown	5 45 3 29 9 75 5 22 5 105 4 45 23 37 22 64 84 20 1 55 16
Apoptosis	5
Cell Cycle and Mitosis	18
Cell adhesion and communication	0 5
Chaperone and Protein Folding	12 61 0
Cytoskeleton	3 17 0 56
DDR pathways and NA metabolism	32 372 2 67 14
Developmental Process	0 6 0 1 1 17
Enzymatic or Catalytic Activity	9 49 2 25 23 94 3
Immune System process	0 19 0 7 0 18 5
Intracellular Protein Traffic	26 176 4 77 33 245 14 225 20
Ion Regulation	1 12 0 2 1 13 1 1 5
Metabolism	8 89 1 41 23 135 8 97 20 201
Miscellaneous	6 69 1 18 10 60 6 46 4 104 1 36
Mitochondrial Organization	13 52 2 27 13 123 8 52 9 101 11 83 23
Protein Modification	6 62 3 16 6 57 2 38 8 114 2 48 26 36
RNA Processing	17 117 4 36 19 201 12 49 30 126 3 78 45 53 37
Ribosomal Biogenesis and Translation	21 197 7 29 36 248 13 78 22 173 8 144 81 102 58 218
Signal transduction	6 22 1 21 4 32 6 29 2 56 1 34 14 13 11 31 47
Stress Response	0 11 0 5 2 22 1 2 6 6 0 4 3 4 4 7 10 0
Transcription and Chromatin-related	20 157 3 42 23 163 4 46 23 149 9 106 34 59 61 120 173 23 4
Transport	6 55 1 4 6 53 3 32 3 72 3 37 9 25 18 26 55 8 1 34
Unknown	5 45 3 29 9 75 5 22 5 105 4 45 23 37 22 64 84 20 1 55 16

Supplementary Figure S2



Supplementary Figure S3

A

Searching the species

Homo sapiens

for the identifier **met30** excluding inparalogs scoring below 0.05

Inparalog and Orthologs cluster for **Saccharomyces cerevisiae** and **Homo sapiens**

Cluster 817				
Protein ID	Species	Score	Bootstrap	Description
P39014	Saccharomyces cerevisiae	1	43%	F-box protein MET30
Q969H0	Homo sapiens	1	99%	F-box/WD repeat-containing protein 7
				Alternative ID MET30_YEAST (UniProt) FBXW7_HUMAN (UniProt)

B

Searching the species

Homo sapiens

for the identifier **cdc4** excluding inparalogs scoring below 0.05

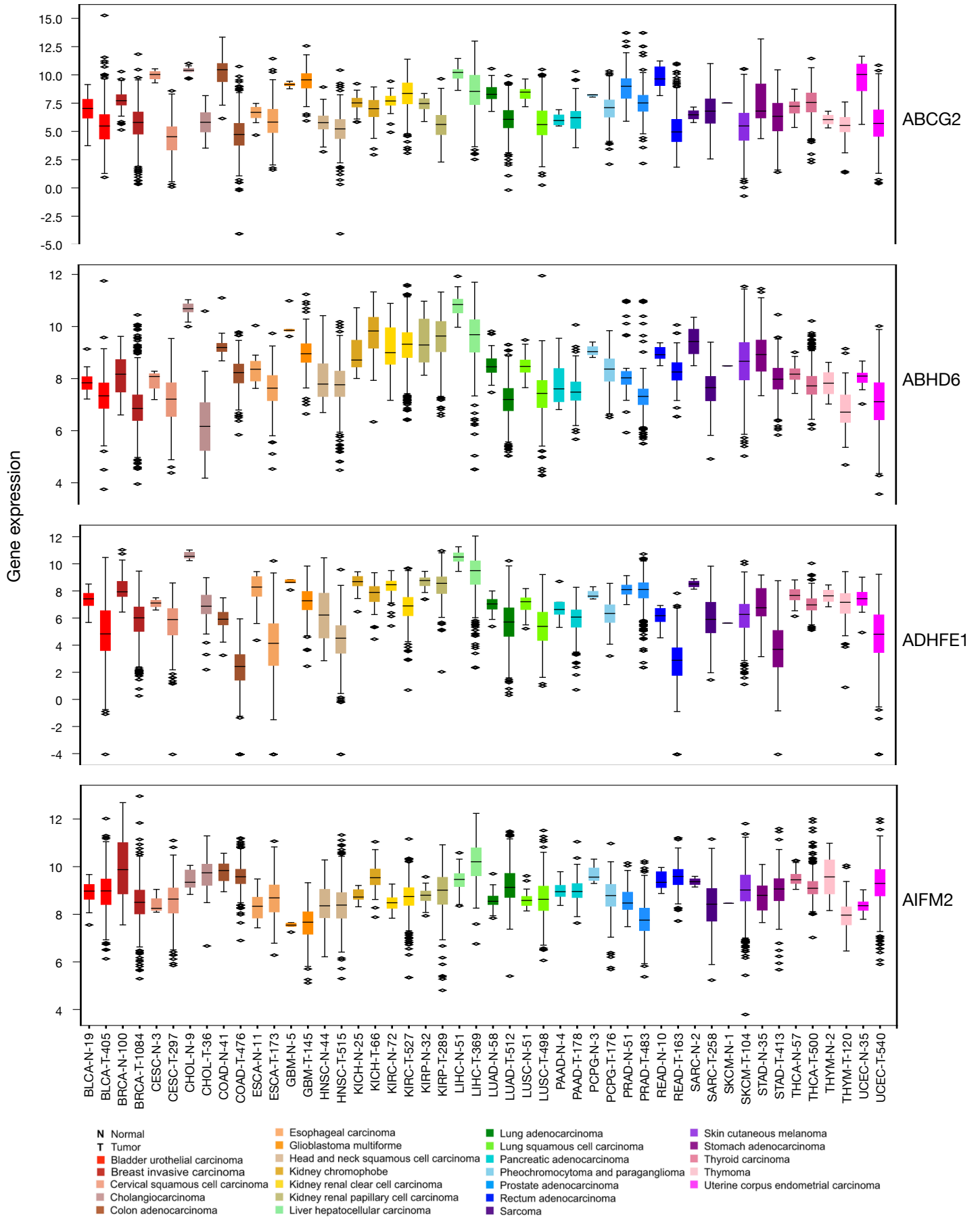
More than one protein found:

Inparanoid Cluster	Gene ID	Protein ID	Species	Description	Alternative ID
Cluster	CDC4	A3LV96	Scheffersomyces stipitis	F box protein, for ubiquitin-dependent degradation	A3LV96_PICST (UniProt)
Cluster	CDC4	Q5A9A6	Candida albicans	Potential ubiquitin ligase F-box subunit	Q5A9A6_CANAL (UniProt)

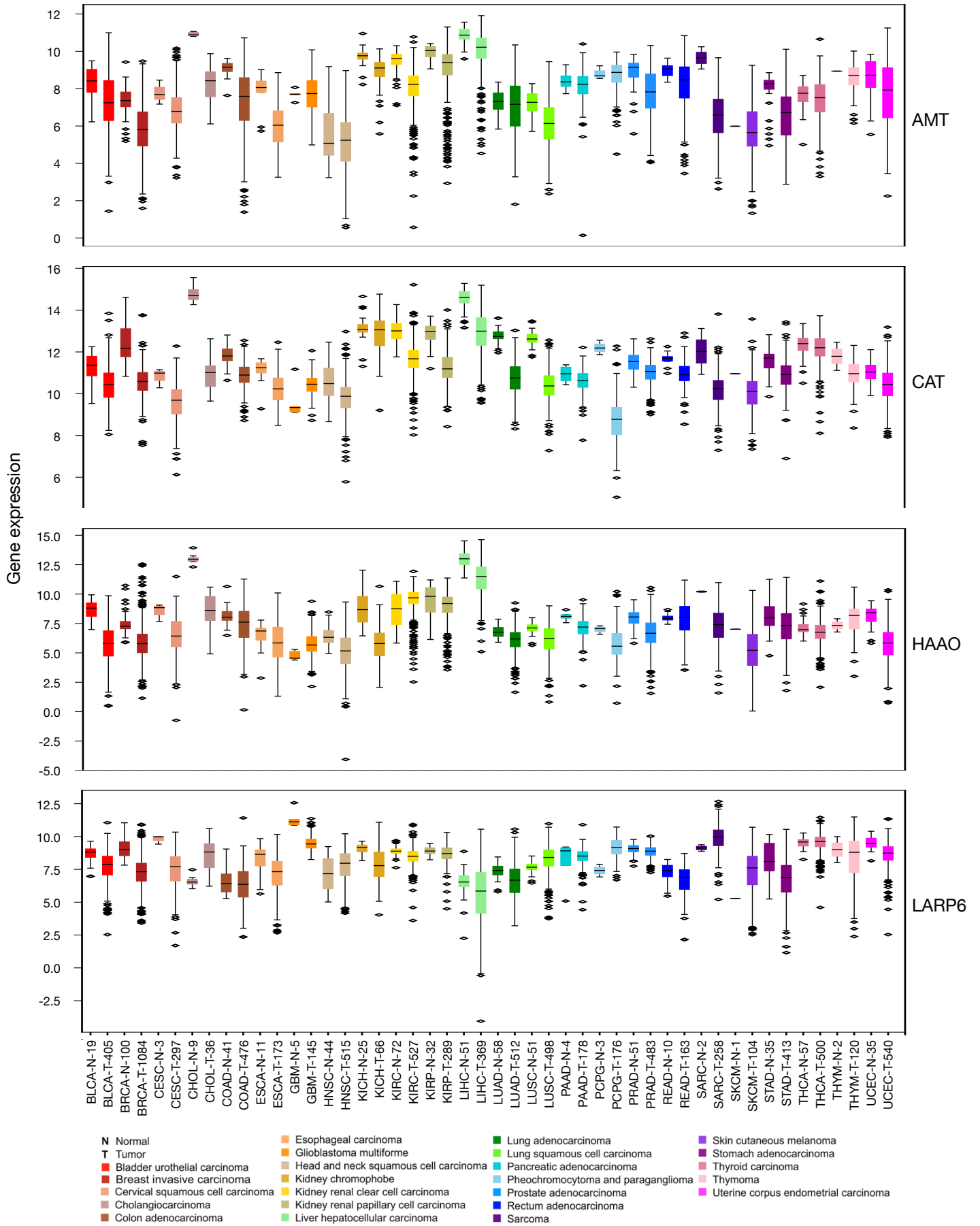
Supplementary Figure S4

Gene Name	Bladder urothelial carcinoma	Breast invasive carcinoma	Cholangiocarcinoma	Colon adenocarcinoma	Esophageal carcinoma	Glioblastoma multiforme	Head and neck squamous cell carcinoma	Kidney chromophobe	Kidney renal clear cell carcinoma	Kidney renal papillary cell carcinoma	Liver hepatocellular carcinoma	Lung adenocarcinoma	Lung squamous cell carcinoma	Pheochromocytoma anc paraganglioma	Prostate adenocarcinoma	Rectum adenocarcinoma	Stomach adenocarcinoma	Thyroid carcinoma	Uterine corpus endometrial carcinoma
ABCG2	5.88E-05	2.48E-46	2.15E-06	2.06E-25	NS	NS	5.88E-04	4.82E-02	9.48E-07	7.70E-15	5.47E-12	4.36E-31	4.88E-24	2.22E-02	1.14E-11	2.28E-07	1.48E-03	7.29E-04	9.46E-20
ABHD6	3.12E-04	3.84E-39	3.22E-06	4.48E-22	6.29E-04	1.02E-03	NS	6.60E-06	NS	NS	6.36E-21	7.45E-30	6.47E-22	1.07E-02	2.57E-18	1.55E-05	1.24E-10	7.18E-11	2.16E-09
ADHFE1	8.84E-08	1.06E-54	2.15E-06	3.44E-25	1.15E-06	9.57E-04	3.12E-09	4.57E-06	4.22E-26	NS	5.55E-14	9.48E-14	2.31E-17	5.58E-03	NS	2.93E-07	3.84E-16	2.33E-14	6.87E-17
AIFM2	NS	1.47E-30	NS	9.61E-03	NS	NS	NS	3.22E-10	7.76E-05	2.87E-02	1.03E-12	6.83E-13	NS	1.10E-02	2.68E-15	NS	6.47E-03	1.00E-12	4.49E-12
AMT	5.01E-04	1.90E-34	2.15E-06	6.14E-15	1.74E-05	NS	NS	2.21E-07	6.21E-29	4.58E-08	4.05E-12	NS	4.26E-11	NS	4.87E-12	1.67E-02	3.73E-10	4.75E-02	2.00E-03
CAT	2.20E-05	1.16E-60	2.15E-06	8.34E-19	1.71E-04	1.17E-02	3.51E-07	NS	8.33E-34	1.28E-16	9.87E-25	1.29E-35	5.58E-32	1.66E-03	2.19E-09	6.83E-05	1.13E-08	2.62E-02	4.11E-07
FBXW7	2.37E-02	3.48E-57	4.50E-04	2.17E-02	4.87E-03	8.77E-05	1.56E-12	4.58E-05	4.88E-20	7.95E-06	1.09E-05	1.60E-02	4.53E-02	2.59E-03	3.69E-06	1.38E-02	3.09E-04	1.08E-12	8.50E-07
HAO	6.77E-12	3.16E-40	2.15E-06	1.74E-03	NS	5.75E-03	1.08E-08	6.29E-10	9.83E-06	9.35E-03	3.65E-19	1.90E-09	1.50E-09	3.38E-02	1.21E-14	NS	1.94E-03	6.98E-04	2.63E-17
LARP6	8.70E-05	2.46E-53	3.56E-05	NS	1.88E-03	9.77E-05	6.33E-04	3.42E-06	3.86E-11	1.74E-02	3.96E-03	1.13E-07	3.13E-10	2.68E-03	8.67E-04	NS	2.78E-07	NS	5.28E-11
LDHD	NS	7.42E-31	2.15E-06	1.37E-25	4.23E-05	9.77E-05	3.86E-19	1.09E-07	6.10E-31	9.57E-04	6.55E-23	1.14E-05	9.66E-13	1.13E-02	NS	4.31E-07	2.96E-10	4.94E-17	NS
MGLL	4.90E-11	6.02E-46	2.05E-02	8.72E-24	4.79E-02	1.37E-03	1.33E-22	NS	2.57E-21	3.27E-02	2.38E-12	1.53E-15	2.31E-31	2.99E-02	3.74E-05	1.55E-05	9.14E-07	1.45E-02	5.21E-07
MSRA	7.13E-05	1.91E-49	2.15E-06	4.22E-14	5.80E-05	2.11E-02	2.15E-17	8.65E-09	7.74E-08	4.80E-09	1.68E-22	4.08E-19	1.34E-30	1.71E-02	6.22E-06	3.87E-04	2.55E-10	7.84E-12	3.88E-02
PEMT	5.19E-05	8.23E-20	2.15E-06	2.19E-15	1.92E-02	9.00E-04	2.92E-02	9.87E-04	2.86E-02	1.47E-06	3.51E-22	4.40E-02	NS	NS	4.59E-03	4.77E-05	NS	3.71E-15	2.11E-03
RGN	1.61E-09	4.13E-52	2.15E-06	2.35E-06	7.82E-06	NS	2.07E-14	7.61E-03	4.79E-19	8.57E-10	3.80E-19	4.48E-17	1.02E-30	1.61E-03	4.03E-15	1.57E-03	3.31E-10	4.50E-11	1.32E-16
UGP2	2.17E-05	1.36E-46	2.15E-06	2.41E-26	1.14E-04	1.58E-02	6.27E-16	2.62E-03	4.67E-15	6.75E-05	3.98E-20	4.26E-05	NS	1.50E-03	1.49E-09	1.31E-07	4.34E-08	5.93E-08	1.22E-05

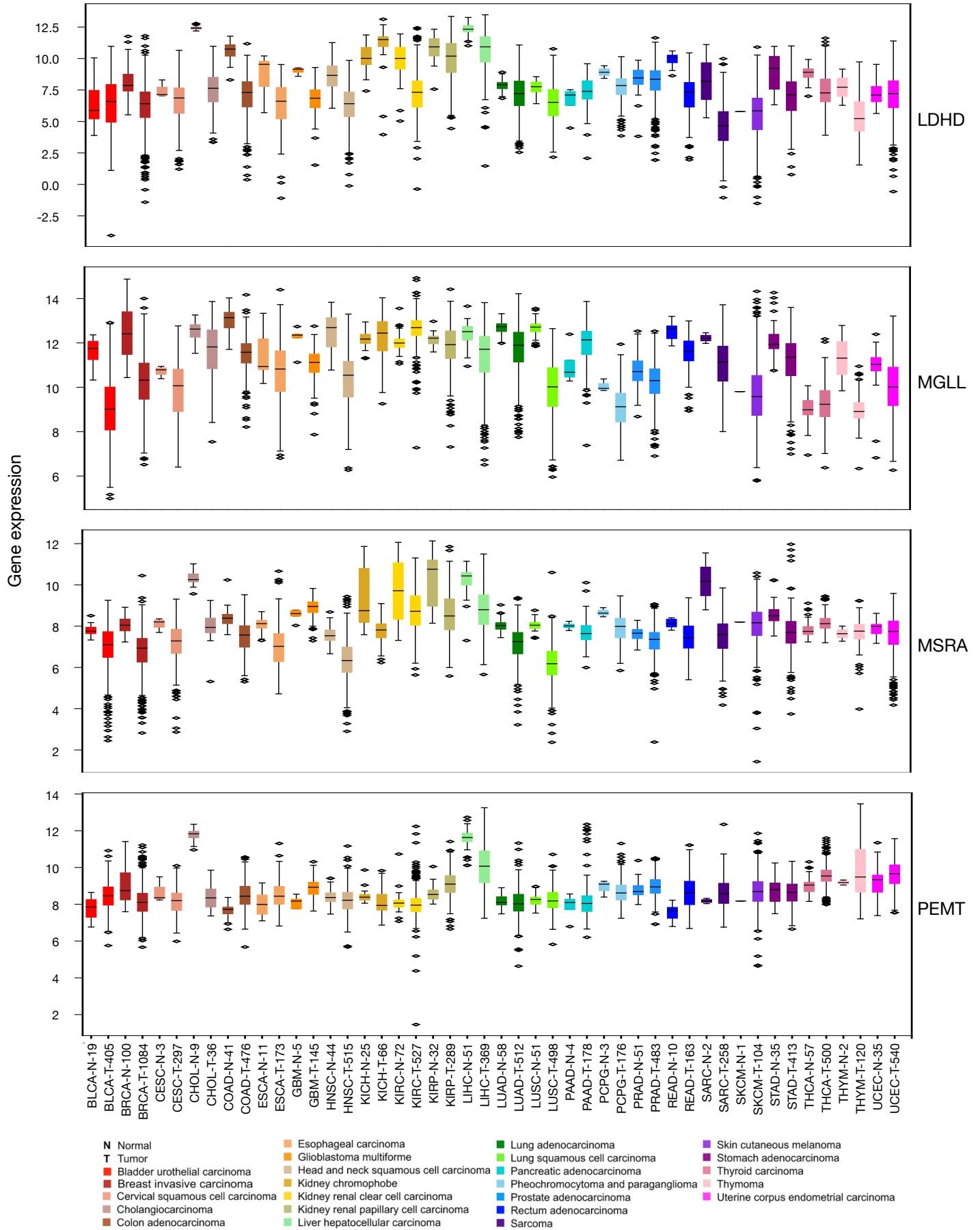
Supplementary Figure S5



Supplementary Figure S6



Supplementary Figure S7



Supplementary Figure S8

