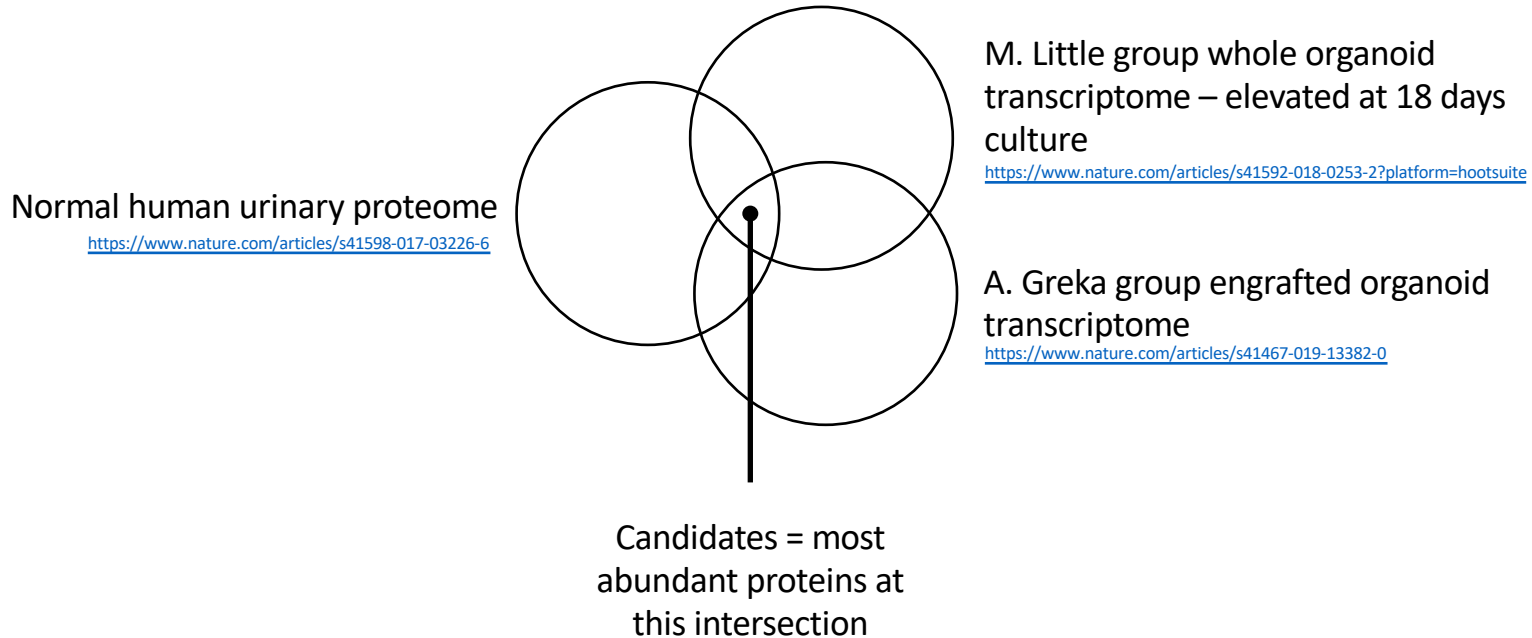


Table S1: Antibodies and lectins used in this study

Antigen	Vendor	Catalog number	Dilution
Collagen I	Rockland	600-401-103	1:100
Collagen III	Rockland	600-401-105	1:100
Collagen V	SouthernBiotech	1350-01	1:100
Collagen VI	SouthernBiotech	1360-01	1:100
F4/80	Santa Cruz Biotechnology	SC52664	1:100
Fibronectin	Millipore Sigma	F3648	1:100
Tenascin C	Millipore Sigma	T3413	1:100
Laminin	Millipore Sigma	L9393	1:100
Cytokeratin 8	Developmental Studies Hybridoma Bank	TROMA-I	1:100
Uromodulin	Meridian Life Science	K90071C	1:100
Uromodulin	R&D Systems	MAB5144	1:100
Rabbit Ig-Alexa488	ThermoFisher	A-21206	1:200
Goat Ig-Alexa568	ThermoFisher	A-11057	1:200
Rat Ig-Alexa488	ThermoFisher	A-4269	1:200
Sheep Ig-HRP	Jackson Immunochemicals	713-035-003	1:10,000
Mouse Ig-HRP	Biorad	0300-0108P	1:10,000
LECTIN			
Lotus lectin-FITC	Vector Laboratories	FL-1321-2	1:200

Figure S1: Method and data sources for comparison of healthy human urinary proteome versus human kidney organoid transcriptomes

Approach to identifying candidates from proteome and transcriptome datasets



Top 50 hits in each dataset ranked by abundance

Urinary proteome

	Accession	Name	MW	IBAQ value	Relative Abundance
1	ALB	Serum albumin OS=Homo sapiens GN=ALB PE=1 SV=2	6.93E+04	4.25E+06	2.94E+11
2	UMOD	Uromodulin OS=Homo sapiens GN=UMOD PE=1 SV=1	6.97E+04	1.18E+06	2.91E+11
3	AMBP	Protein AMBP OS=Homo sapiens GN=AMBP PE=1 SV=1	3.90E+04	2.70E+06	1.05E+11
4	IGKC	Ig kappa chain C region OS=Homo sapiens GN=IGKC PE=1 SV=1	1.16E+04	7.83E+06	9.09E+10
5	KNG1	Kininsogen-1 OS=Homo sapiens GN=KNG1 PE=1 SV=2	7.19E+04	1.02E+06	7.35E+10
6	IGHG2	Ig gamma-2 chain C region OS=Homo sapiens GN=IGHG2 PE=1 SV=2	3.59E+04	1.85E+06	6.63E+10
7	IGHG1	Ig gamma-1 chain C region OS=Homo sapiens GN=IGHG1 PE=1 SV=1	3.61E+04	1.60E+06	5.78E+10
8	APOD	Apolipoprotein D OS=Homo sapiens GN=APOD PE=1 SV=1	2.13E+04	2.35E+06	5.00E+10
9	PTGDS	Prostaglandin-H2 D-isomerase OS=Homo sapiens GN=PTGDS PE=1 SV=1	2.10E+04	2.22E+06	4.68E+10
10	SPP1	Osteopontin OS=Homo sapiens GN=SPP1 PE=1 SV=1	3.54E+04	1.29E+06	4.57E+10
11	CD59	CD59 glycoprotein OS=Homo sapiens GN=CD59 PE=1 SV=1	1.42E+04	2.96E+06	4.19E+10
12	IGHG3	Ig gamma-3 chain C region OS=Homo sapiens GN=IGHG3 PE=1 SV=2	4.13E+04	9.25E+05	3.82E+10
13	HSPG2	Basement membrane-specific heparan sulfate proteoglycan core protein OS=Homo sapiens GN=HSPG2 PE=1 SV=2	4.69E+05	7.94E+04	3.72E+10
14	NRD2	Protein NDRG2 OS=Homo sapiens GN=NRD2 PE=1 SV=2	4.08E+04	9.05E+05	3.69E+10
15	IGHA1	Ig alpha-1 chain C region OS=Homo sapiens GN=IGHA1 PE=1 SV=2	3.76E+04	8.44E+05	3.17E+10
16	EGF	Pro-epidermal growth factor OS=Homo sapiens GN=EGF PE=1 SV=2	1.34E+05	2.35E+05	3.15E+10
17	IGHG4	Ig gamma-4 chain C region OS=Homo sapiens GN=IGHG4 PE=1 SV=1	3.59E+04	8.31E+05	2.98E+10
18	RNASE2	Non-secretory ribonuclease OS=Homo sapiens GN=RNASE2 PE=1 SV=2	1.83E+04	1.60E+06	2.93E+10
19	TIH4	Inter-alpha-trypsin inhibitor heavy chain H4 OS=Homo sapiens GN=TIH4 P	1.03E+05	2.72E+05	2.81E+10
20	VASN	Vasorin OS=Homo sapiens GN=VASN PE=1 SV=1	7.17E+04	3.85E+05	2.76E+10
21	PIK3P1	Phosphoinositide-3-kinase-interacting protein 1 OS=Homo sapiens GN=PIK3P1	2.82E+04	9.54E+05	2.69E+10
22	AMY2A	Pancreatic alpha-amylase OS=Homo sapiens GN=AMY2A PE=1 SV=2	5.77E+04	4.15E+05	2.39E+10
23	AZGP1	Zinc-alpha-2-glycoprotein OS=Homo sapiens GN=AZGP1 PE=1 SV=2	3.42E+04	5.98E+05	2.05E+10
24	ORM1	Alpha-1-acid glycoprotein 1 OS=Homo sapiens GN=ORM1 PE=1 SV=1	2.35E+04	8.51E+05	2.00E+10
25	KRT13	Keratin, type I cytoskeletal 13 OS=Homo sapiens GN=KRT13 PE=1 SV=4	4.96E+04	3.52E+05	1.75E+10
26	PSAP	Proactivator polypeptide OS=Homo sapiens GN=PSAP PE=1 SV=2	5.81E+04	2.73E+05	1.58E+10
27	KLC1	Kallikrein-1 OS=Homo sapiens GN=KLC1 PE=1 SV=2	2.80E+04	5.33E+05	1.54E+10
28	SERPINA5	Plasma serine protease inhibitor OS=Homo sapiens GN=SERPINA5 PE=1 SV=1	4.56E+04	3.36E+05	1.53E+10
29	WFDC2	WAP four-disulfide core domain protein 2 OS=Homo sapiens GN=WFDC2 P	1.30E+04	1.18E+06	1.53E+10
30	TF	Serotransferrin OS=Homo sapiens GN=TF PE=1 SV=3	7.70E+04	1.88E+05	1.44E+10
31	SECTM1	Secreted and transmembrane protein 1 OS=Homo sapiens GN=SECTM1 PE=1 SV=1	2.70E+04	5.17E+05	1.40E+10
32	MASP2	Mannan-binding lectin serine protease 2 OS=Homo sapiens GN=MASP2 PE=1 SV=1	7.57E+04	1.77E+05	1.34E+10
33	CD44	CD44 antigen OS=Homo sapiens GN=CD44 PE=1 SV=3	8.15E+04	1.64E+05	1.34E+10
34	SERPINC1	Plasma protease C1 inhibitor OS=Homo sapiens GN=SERPINC1 PE=1 SV=2	5.51E+04	2.42E+05	1.34E+10
35	CUBN	Cubilin OS=Homo sapiens GN=CUBN PE=1 SV=5	3.98E+05	3.27E+04	1.30E+10
36	LMAN2	Vesicular integral-membrane protein VIP36 OS=Homo sapiens GN=LMAN2	4.02E+04	3.20E+05	1.29E+10
37	CLU	Clusterin OS=Homo sapiens GN=CLU PE=1 SV=1	5.25E+04	2.38E+05	1.25E+10
38	KRT4	Keratin, type II cytoskeletal 4 OS=Homo sapiens GN=KRT4 PE=1 SV=4	5.72E+04	2.16E+05	1.23E+10
39	RNASE1	Ribonuclease pancreatic OS=Homo sapiens GN=RNASE1 PE=1 SV=4	1.76E+04	6.99E+05	1.23E+10
40	AHS5	Alpha-2-HS-glycoprotein OS=Homo sapiens GN=AHS5 PE=1 SV=1	3.93E+04	3.00E+05	1.18E+10
41	PIGR	Polymeric immunoglobulin receptor OS=Homo sapiens GN=PIGR PE=1 SV=1	8.32E+04	1.39E+05	1.16E+10
42	GAA	Lysosomal alpha-glucosidase OS=Homo sapiens GN=GAA PE=1 SV=4	1.05E+05	9.63E+04	1.01E+10
43	F2	Prothrombin OS=Homo sapiens GN=F2 PE=1 SV=2	7.00E+04	1.44E+05	1.01E+10
44	GSN	Gelsolin OS=Homo sapiens GN=GSN PE=1 SV=1	8.56E+04	1.18E+05	1.01E+10
45	PGA3	Pepsin A-3 OS=Homo sapiens GN=PGA3 PE=1 SV=1	4.19E+04	2.24E+05	9.40E+09
46	KRT1	Keratin, type I cytoskeletal 1 OS=Homo sapiens GN=KRT1 PE=1 SV=6	6.60E+04	1.18E+05	9.12E+09
47	LGALS3BP	Galectin-3-binding protein OS=Homo sapiens GN=LGALS3BP PE=1 SV=1	6.53E+04	1.37E+05	8.97E+09
48	RPS12	40S ribosomal protein S12 OS=Homo sapiens GN=RPS12 PE=1 SV=3	1.45E+04	6.17E+05	8.95E+09
49	YIPF3	Protein YIPF3 OS=Homo sapiens GN=YIPF3 PE=1 SV=1	3.82E+04	2.31E+05	8.82E+09

Red text = hits represented in cultured organoid and implanted organoid transcriptomes

Candidates selected for further analysis

Spp1 = osteopontin

CD59 = MAC inhibitory protein

HSPG2 = perlecan

PSAP = prosaposin

CUBN = cubulin