

SUPPLEMENT

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Table S1. Proteomic identification of the increase of relative content of renal proteins of hypertensive rats bound to renalase peptide RP220 in comparison with that of the control animals.

№	Uniprot accession number	Uniprot gene number	Uniprot protein name	Function	Localization	-LOG(P-value)	Fold change
1	B5DFN2	<i>Ahcy11</i>	S-adenosylhomocysteine hydrolase-like protein 1	3	ER. C. PM. Mi	2.909	7.871
2	O35331	<i>Pdxk</i>	Pyridoxal kinase	3	C	1.761	10.129
3	O70351	<i>Hsd17b10</i>	3-hydroxyacyl-CoA dehydrogenase type-2	7	Mch	4.770	51.731
4	Q66HT1	<i>Aldob</i>	Fructose-bisphosphate aldolase	1	C	2.640	45.673
5	D3ZN03	<i>LOC100362751</i>	60S acidic ribosomal protein P2	5	C	1.094	1.717
6	P02761		Major urinary protein	3	C. S	2.074	19.433
7	P02770	<i>Alb</i>	Albumin	2	C	3.277	2.365
8	P04644	<i>Rps17</i>	40S ribosomal protein S17	5	C	3.310	1.675
9	P05426	<i>Rpl7</i>	60S ribosomal protein L7	5	C	2.139	1.897
10	P06761	<i>Hspa5</i>	Endoplasmic reticulum chaperone BiP	4	ER. Me. C	3.153	2.121
11	Q6LDS4	<i>Sod1</i>	Superoxide dismutase [Cu-Zn]	4	C. N	3.504	16.619
12	P08461	<i>Dlat</i>	Dihydrolipoyllysine-	1	Mch	2.527	43.613

			residue acetyltransferase component of pyruvate dehydrogenase complex. mitochondrial				
13	P09034	<i>Ass1</i>	Argininosuccinate synthase	6	C	4.856	12.192
14	P09606	<i>Glul</i>	Glutamine synthetase	6	PM. C. ER. M. Mi. Mch	4.308	2.297
15	P0DP31	<i>Calm3</i>	Calmodulin-3	3	C	0.883	2.727
16	P10860	<i>Glud1</i>	Glutamate dehydrogenase 1. mitochondrial	6	ER. Mch	1.190	2.272
17	P12001	<i>Rpl18</i>	60S ribosomal protein L18	5	C. ER	0.933	4.708
18	P14408	<i>Fh</i>	Fumarate hydratase. mitochondrial	1	C. N	2.732	25.380
19	P14604	<i>Echs1</i>	Enoyl-CoA hydratase. mitochondrial	1	Mch	2.590	44.334
20	P16086	<i>Sptan1</i>	Spectrin alpha chain. non-erythrocytic 1	2	C	0.965	2.633
21	P17077	<i>Rpl9</i>	60S ribosomal protein L9	5	C	2.722	2.780
22	P19112	<i>Fbp1</i>	Fructose-1.6- biphosphatase 1	1	C	4.084	159.814
23	P21531	<i>Rpl3</i>	60S ribosomal protein L3	5	N. C	1.446	1.885
24	P21533	<i>Rpl6</i>	60S ribosomal protein L6	5	C. ER	2.095	10.587
25	B2RYU2	<i>Rpl12</i>	60S ribosomal protein L12	5	C	2.645	2.842
26	P26772	<i>Hspe1</i>	10 kDa heat shock protein. mitochondrial	4	Mch	2.849	2.487
27	P27605	<i>Hprt1</i>	Hypoxanthine- guanine phosphoribosyltransfe rase	6	C	3.298	4.981
28	D3ZT78	<i>AABR0 702919 5.1</i>	40S ribosomal protein S2	5	C	2.645	1.562

29	P41123	<i>Rpl13</i>	60S ribosomal protein L13	5	C	3.358	3.289
30	P41498	<i>Acp1</i>	Low molecular weight phosphotyrosine protein phosphatase	3	C	3.649	2.900
31	P48500	<i>Tpi1</i>	Triosephosphate isomerase	1	C	1.548	2.686
32	P48721	<i>Hspa9</i>	Stress-70 protein. mitochondrial	4	Mch. N	4.955	6.783
33	P49432	<i>Pdhb</i>	Pyruvate dehydrogenase E1 component subunit beta. mitochondrial	1	Mch	2.492	3.400
34	P50137	<i>Tkt</i>	Transketolase	1	C	1.543	4.387
35	P51635	<i>Akr1a1</i>	Aldo-keto reductase family 1 member A1	4	PM. C. M	2.157	4.016
36	P56574	<i>Idh2</i>	Isocitrate dehydrogenase [NADP]. mitochondrial	1	Mch	1.728	2.661
37	P60123	<i>Ruvb1l</i>	RuvB-like 1	5	C. M. N	1.753	2.314
38	A0A0H2 UHG7	<i>Rps20</i>	40S ribosomal protein S20	5	C. N	1.088	1.552
39	P62246	<i>Rps15a</i>	40S ribosomal protein S15a	5	C	2.213	1.697
40	P62250	<i>Rps16</i>	40S ribosomal protein S16	5	C	5.916	3.646
41	P62278	<i>Rps13</i>	40S ribosomal protein S13	5	C	1.152	1.998
42	P62282	<i>Rps11</i>	40S ribosomal protein S11	5	C	1.483	2.928
43	F1M013	<i>Rpl7a</i>	60S ribosomal protein L7a	5	C	2.100	4.383
44	M0R757	<i>LOC100360413</i>	Elongation factor 1-alpha	5	C	2.056	1.438
45	X1WI37	<i>Rps4x</i>	40S ribosomal protein S4	5	C	3.055	2.189
46	P62718	<i>Rpl18a</i>	60S ribosomal protein L18a	5	C	2.184	9.817
47	P62890	<i>Rpl30</i>	60S ribosomal protein	5	C	1.444	3.174

			L30				
48	P62902	<i>Rpl31</i>	60S ribosomal protein L31	5	C	1.665	1.700
49	P62909	<i>Rps3</i>	40S ribosomal protein S3	5	C. M. Mch. N	1.080	1.557
50	P62914	<i>Rpl11</i>	60S ribosomal protein L11	5	C. N	1.141	1.887
51	P62919	<i>Rpl8</i>	60S ribosomal protein L8	5	C	1.265	5.368
52	P63018	<i>Hspa8</i>	Heat shock cognate 71 kDa protein	4	C. Me. N. PM	3.093	5.368
53	A0A0G2K9A2	<i>Arpc2</i>	Arp2/3 complex 34 kDa subunit	2	C	1.581	6.132
54	P98158	<i>Lrp2</i>	Low-density lipoprotein receptor-related protein 2	3	PM. ER. M	3.084	117.648
55	G3V6P2	<i>Dlst</i>	Dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex. mitochondrial	1	Mch	3.482	21.370
56	G3V7J0	<i>Aldh6a1</i>	Aldehyde dehydrogenase 6 family. member A1	1	C	3.150	9.952
57	Q07523	<i>Hao2</i>	2-Hydroxyacid oxidase 2	7	Per	3.387	202.426
58	Q5XI73	<i>Arhgdia</i>	Rho GDP-dissociation inhibitor 1	3	C	2.342	4.881
59	Q60587	<i>Hadhb</i>	Trifunctional enzyme subunit beta. mitochondrial	7	Mch	4.465	9.669
60	Q62658	<i>Fkbp1a</i>	Peptidyl-prolyl cis-trans isomerase FKBP1A	6	C. M	2.530	2.006
61	Q63507	<i>Rpl14</i>	60S ribosomal protein L14	5	C	1.154	2.911
62	Q63716	<i>Prdx1</i>	Peroxisredoxin-1	4	C	6.248	10.137
63	Q64057	<i>Aldh7a1</i>	Alpha-aminoadipic semialdehyde	4	C. N. Mch	3.047	32.334

			dehydrogenase				
64	Q64428	<i>Hadha</i>	Trifunctional enzyme subunit alpha. mitochondrial	7	Mch	3.115	13.837
65	Q68FP1	<i>Gsn</i>	Gelsolin	2	C. S	2.631	9.282
66	Q68FS4	<i>Lap3</i>	Cytosol aminopeptidase	6	C	2.902	2.291
67	Q6AYS7	<i>Acy1a</i>	Aminoacylase-1A	6	C	4.640	208.206
68	Q6AYT0	<i>Cryz</i>	Quinone oxidoreductase	1	C	2.930	29.717
69	Q6IRK9	<i>Cpq</i>	Carboxypeptidase Q	6	ER. G. L	3.608	43.878
70	Q6P0K8	<i>Jup</i>	Junction plakoglobin	2	C. M	1.173	1.989
71	Q6P502	<i>Cct3</i>	T-complex protein 1 subunit gamma	4	C	2.283	1.614
72	Q6Q0N1	<i>Cndp2</i>	Cytosolic non-specific dipeptidase	6	C	2.500	4.104
73	Q792I0	<i>Lin7c</i>	Protein lin-7 homolog C	2	PM. M	2.582	8.106
74	Q7M0E	<i>Dstn</i>	Destrin	2	C	1.559	1.821
75	Q7TPB1	<i>Cct4</i>	T-complex protein 1 subunit delta	4	C	3.622	2.344
76	Q8VI04	<i>Asrgl1</i>	Isoaspartyl peptidase/L-asparaginase	6	C	2.673	26.948
77	Q9ER34	<i>Aco2</i>	Aconitate hydratase. mitochondrial	1	Mch	1.739	4.512
78	A0A0G2JSS8	<i>Prdx5</i>	Peroxiredoxin-5	4	C	1.786	2.421
79	Q9WUW9	<i>Sult1c2a</i>	Sulfotransferase 1C2A	3	C. L	5.037	3.952
80	F1LMC7	<i>Septin7</i>	Septin	3	C. N	4.685	3.052
81	Q9Z0V6	<i>Prdx3</i>	Thioredoxin-dependent peroxide reductase. mitochondrial	4	C. ER. Mch	3.193	15.984
82	P35704	<i>Prdx2</i>	Peroxiredoxin-2	4	C	2.649	8.907
83	F7FKI5	<i>Pdhal</i>	Pyruvate dehydrogenase E1 component subunit alpha	1	Mch	3.738	21.283
84	D4A8D5	<i>Flnb</i>	Filamin B	2	N. Ve	1.930	2.069

85	B2RZB7	<i>Snrpd1</i>	Small nuclear ribonucleoprotein Sm D1	5	C. N	2.833	4.302
86	B5DES0	<i>Snrpd2</i>	Small nuclear ribonucleoprotein Sm D2	5	C. N	1.413	1.919
87	A6JVU7	<i>Vil1</i>	Vil1 protein	2	C	4.858	144.387
88	C0JPT7	<i>Flna</i>	Filamin A	2	C. N. PM. G	1.970	1.609
89	D4A830	<i>Ppa2</i>	Inorganic diphosphatase	3	C. Mch	6.498	141.832
90	D4AC23	<i>Cct7</i>	T-complex protein 1 subunit eta	4	C	1.616	1.643
91	D4ACB8	<i>Cct8</i>	T-complex protein 1 subunit theta	4	C. Mch	1.648	2.294
92	P86252	<i>Pura</i>	Transcriptional activator protein Pur-alpha	5	N	1.622	1.452
93	F1LR02	<i>Coll18a1</i>	Collagen type XVIII alpha 1 chain	2	PM	6.010	9.917
94	G3V8T4	<i>Ddb1</i>	DNA damage-binding protein 1	5	N	2.020	16.106
95	M0R907	<i>Snrpd3</i>	Small nuclear ribonucleoprotein Sm D3	5	C. N	2.740	7.965
96	P35427	<i>Rpl13a</i>	60S ribosomal protein L13a	5	C	4.666	4.158
97	Q5U302	<i>Ctnna1</i>	Catenin (Cadherin associated protein). alpha 1	2	C. M	2.257	2.358
98	P47198	<i>Rpl22</i>	60S ribosomal protein L22	5	C	1.423	2.552

Here and in Table S2:

Figures in the column "Functions" indicate the following protein functions:

1. Proteins/enzymes involved in energy generation and carbohydrate metabolism.
2. Proteins involved in cytoskeleton formation and exocytosis.
3. Proteins involved in signal transduction and regulation of enzyme activity.
4. Antioxidant and protective proteins/enzymes.
5. Protein regulators of gene expression. cell division and differentiation.
6. Enzymes involved in metabolism of proteins. amino acids. and other nitrogenous compounds.
7. Enzymes involved in metabolism of lipids.

Protein localization: C – cytoplasm. N – nucleus. M – membranes. PM – plasma membrane. Mch – mitochondria. Mi – microsomes. Me – melanosomes. ER – endoplasmic reticulum. G – Golgi. L – lysosomes. Ve – vesicles. Per – peroxisomes. S – secreted proteins.

Table S2. Proteomic identification of the decrease of relative content of renal proteins of hypertensive rats bound to renalase peptide RP220 in comparison with that of the control animals.

№	Uniprot accession number	Uniprot gene number	Uniprot protein name	Function	Localization	-LOG(P-value)	Fold change
1	A9UMV8	<i>H2aj</i>	Histone H2A.J	5	N	3.558	0.321
2	O35179	<i>Sh3gl2</i>	Endophilin-A1	2	C. M. Ve	2.514	0.383
3	O35244	<i>Prdx6</i>	Peroxioredoxin-6	4	C. L	2.526	0.504
4	P00564	<i>Ckm</i>	Creatine kinase M-type	1	C	2.507	0.506
5	P04256	<i>Hnrnpa1</i>	Heterogeneous nuclear ribonucleoprotein A1	5	C. N	2.656	0.262
6	B5DEN4	<i>Ldha</i>	L-lactate dehydrogenase	1	C	1.386	0.581
7	Q5BJ93	<i>Eno1</i>	Phosphopyruvate hydratase	1	C	1.478	0.754
8	P04785	<i>P4hb</i>	Protein disulfide-isomerase	4	ER. Me. PM	2.560	0.438
9	P05197	<i>Eef2</i>	Elongation factor 2	5	C. N	4.039	0.240
10	P07150	<i>Anxa1</i>	Annexin A1	2	PM. C	1.907	0.237
11	P09527	<i>Rab7a</i>	Ras-related protein Rab-7a	3	Me. M. Ve. Mch	2.153	0.447
12	P11442	<i>Cltc</i>	Clathrin heavy chain 1	2	C. M	3.338	0.395
13	P11980	<i>Pkm</i>	Pyruvate kinase PKM	1	C. N	3.100	0.537
14	P12749	<i>Rpl26</i>	60S ribosomal protein L26	5	C	1.161	0.400
15	P12839	<i>Nefm</i>	Neurofilament medium polypeptide	2	C	2.227	0.352
16	P13084	<i>Npm1</i>	Nucleophosmin	5	N. C. Mch	2.426	0.430
17	P13668	<i>Stmn1</i>	Stathmin	2	C	1.033	0.410

18	A9CMB7	<i>Dars1</i>	Aspartate--tRNA ligase. cytoplasmic	5	C	3.019	0.426
19	P15865	<i>H1-4</i>	Histone H1.4	5	N	3.173	0.494
20	P16617	<i>Pgk1</i>	Phosphoglycerate kinase 1	1	C	1.868	0.466
21	P17078	<i>Rpl35</i>	60S ribosomal protein L35	5	C	1.313	0.220
22	P18484	<i>Ap2a2</i>	AP-2 complex subunit alpha-2	2	PM. M	1.238	0.268
23	P19945	<i>Rplp0</i>	60S acidic ribosomal protein P0	5	C. N	2.273	0.091
24	P20280	<i>Rpl21</i>	60S ribosomal protein L21	5	C. ER	1.188	0.245
25	P21707	<i>Syt1</i>	Synaptotagmin-1	3	Ve. M. C	3.235	0.513
26	P25113	<i>Pgam1</i>	Phosphoglycerate mutase 1	1	C. N	1.865	0.442
27	P34058	<i>Hsp90a b1</i>	Heat shock protein HSP 90-beta	4	PM. M. C. N. S	1.210	0.679
28	P35565	<i>Canx</i>	Calnexin	2	ER. Me	1.327	0.353
29	P38983	<i>Rpsa</i>	40S ribosomal protein SA	5	PM. M. N. C	2.343	0.154
30	P40112	<i>Psmb3</i>	Proteasome subunit beta type-3	6	C. N	2.171	0.114
31	P46462	<i>Vcp</i>	Transitional endoplasmic reticulum ATPase	3	C. ER. N	1.573	0.351
32	P48679	<i>Lmna</i>	Prelamin-A/C	2	N	2.922	0.190
33	P60711	<i>Actb</i>	Actin. cytoplasmic 1	2	C. N	3.229	0.428
34	P84079	<i>Arf1</i>	ADP-ribosylation factor 1	3	M. G	2.010	0.608
35	P61265	<i>Stx1b</i>	Syntaxin-1B	2	M	2.822	0.285
36	P61765	<i>Stxbp1</i>	Syntaxin-binding protein 1	2	C. M	3.178	0.434
37	P61980	<i>Hnrnpk</i>	Heterogeneous nuclear ribonucleoprotein K	5	C. N	1.975	0.451
38	B5DEL9	<i>Rps7</i>	40S ribosomal protein S7	5	C	1.316	0.254
39	P62804	<i>H4c2; Hist1h4m; H4c16</i>	Histone H4	5	N	3.066	0.327
40	Q62636	<i>Rap1b</i>	Ras-related protein Rap-	3	PM. C.	2.476	0.361

			1b		M		
41	D4ACJ1	<i>LOC100363469</i>	40S ribosomal protein S24	5	C	2.065	0.285
42	P62907	<i>Rpl10a</i>	60S ribosomal protein L10a	5	C	2.229	0.451
43	P63102	<i>Ywhaz</i>	14-3-3 protein zeta/delta	3	C	2.070	0.580
44	P63174	<i>Rpl38</i>	60S ribosomal protein L38	5	C	1.452	0.125
45	P63245	<i>Rack1</i>	Receptor of activated protein C kinase 1	3	PM. C. N	1.936	0.420
46	P67779	<i>Phb1</i>	Prohibitin 1	3	PM. M. Mch. N	2.544	0.282
47	P68370	<i>Tuba1a</i>	Tubulin alpha-1A chain	2	C. Mch	5.065	0.307
48	P69897	<i>Tubb5</i>	Tubulin beta-5 chain	2	C	2.814	0.258
49	P82995	<i>Hsp90a1</i>	Heat shock protein HSP 90-alpha	4	PM. C. M. Mch. N	2.354	0.569
50	P84245	<i>H3-3b</i>	Histone H3.3	5	N	3.349	0.296
51	P85108	<i>Tubb2a</i>	Tubulin beta-2A chain	2	CMch	2.128	0.124
52	Q00729	<i>H2bc1</i>	Histone H2B type 1-A	5	N	3.597	0.313
53	Q07936	<i>Anxa2</i>	Annexin A2	2	PM. S	2.063	0.323
54	Q09073	<i>Slc25a5</i>	ADP/ATP translocase 2	2	M. Mch	2.203	0.456
55	Q4FZT9	<i>Psm2</i>	26S proteasome non-ATPase regulatory subunit 2	6	C. N	1.788	0.033
56	Q5XFX0	<i>Tagln2</i>	Transgelin-2	2	C	2.540	0.292
57	Q5XIF6	<i>Tuba4a</i>	Tubulin alpha-4A chain	2	C	1.778	0.338
58	Q5XIM9	<i>Cct2</i>	T-complex protein 1 subunit beta	4	C	1.602	0.403
59	Q5U216	<i>Ddx39a</i>	ATP-dependent RNA helicase DDX39A	5	C. N	1.354	0.071
60	Q64119	<i>Myl6</i>	Myosin light polypeptide 6	2	C	2.452	0.460
61	Q66HD0	<i>Hsp90b1</i>	Endoplasmic	4	ER	1.493	0.479
62	Q68FR6	<i>Eef1g</i>	Elongation factor 1-gamma	5	C. N	2.332	0.691
63	A0A0H2UHM7	<i>Tuba1c</i>	Tubulin alpha chain	2	C	3.962	0.087
64	Q6MG61	<i>Clic1</i>	Chloride intracellular	2	N. C.	2.010	0.629

			channel protein 1		PM		
65	Q6NYB7	<i>Rab1A</i>	Ras-related protein Rab-1A	3	C. ER. G. M	1.418	0.682
66	Q8CFN2	<i>Cdc42</i>	Cell division control protein 42 homolog	2	C. M. PM	2.147	0.399
67	Q99068	<i>Lrpap1</i>	Alpha-2-macroglobulin receptor-associated protein	4	ER. G	1.739	0.339
68	Q9QXQ0	<i>Actn4</i>	Alpha-actinin-4	2	C. N	1.527	0.589
69	Q9Z1P2	<i>Actn1</i>	Alpha-actinin-1	2	C. M. PM	1.562	0.472
70	Q9Z2L0	<i>Vdac1</i>	Voltage-dependent anion-selective channel protein	2	PM	1.328	0.597
71	Q8VHV7	<i>Hnrnp1</i>	Heterogeneous nuclear ribonucleoprotein H	5	N	1.514	0.488
72	G3V9R8	<i>Hnrnpc</i>	Heterogeneous nuclear ribonucleoprotein C	5	N	1.211	0.567
73	F1M5A4	<i>Katnal2</i>	Katanin p60 ATPase-containing subunit A-like 2	2	C	2.449	0.220
74	P48004	<i>Psmα7</i>	Proteasome subunit alpha type-7	6	C. N	3.111	0.227
75	D3ZGE2	<i>Mpo</i>	Myeloperoxidase	4	S	1.446	0.356
76	G3V9G4	<i>Acy</i>	ATP-citrate synthase	1	C	2.156	0.158
77	A0A0U1RRV7	<i>Srsf3</i>	Serine and arginine rich splicing factor 3	5	N	1.590	0.450
78	B2RZ72	<i>Arpc4</i>	Actin-related protein 2/3 complex subunit 4	2	C	2.882	0.465
79	Q4KLJ1	<i>Sfrs7</i>	RCG61762. isoform CRA_a	5	N	1.432	0.520
80	D4A9L2	<i>Srsf1</i>	Serine/arginine-rich splicing factor 1	5	N	1.418	0.760
81	A7VJC2	<i>Hnrnpa2b1</i>	Heterogeneous nuclear ribonucleoproteins A2/B1	5	C. N. S	2.893	0.283
82	P52296	<i>Kpnb1</i>	Importin subunit beta-1	3	C. N	3.573	0.128
83	Q62812	<i>Myh9</i>	Myosin-9	2	C. Ve	3.435	0.457
84	G3V7C6	<i>Tubb4b</i>	Tubulin beta chain	2	C	4.010	0.249
85	G3V8C3	<i>Vim</i>	Vimentin	2	PM. C. M. N	2.372	0.267
86	Q7TP47	<i>Syncrin</i>	Heterogeneous nuclear ribonucleoprotein Q	5	Я. C. Mi	1.372	0.362

87	P25809	<i>Ckmt1</i>	Creatine kinase U-type. mitochondrial	1	M. Mch	1.447	0.703
88	Q5U3Y8	<i>Btf3</i>	Transcription factor BTF3	5	N	2.447	0.292
89	Q6AYD5	<i>Gspt1</i>	G1 to S phase transition protein1	5	N. C	2.179	0.165
90	Q6P3V8	<i>Eif4a1</i>	ATP-dependent RNA helicase	5	C	3.053	0.225