Electronic Supplementary Information

Ultrasmall Gold Nanoparticles for Highly Specific Isolation/Enrichment of N-linked Glycosylated Peptides

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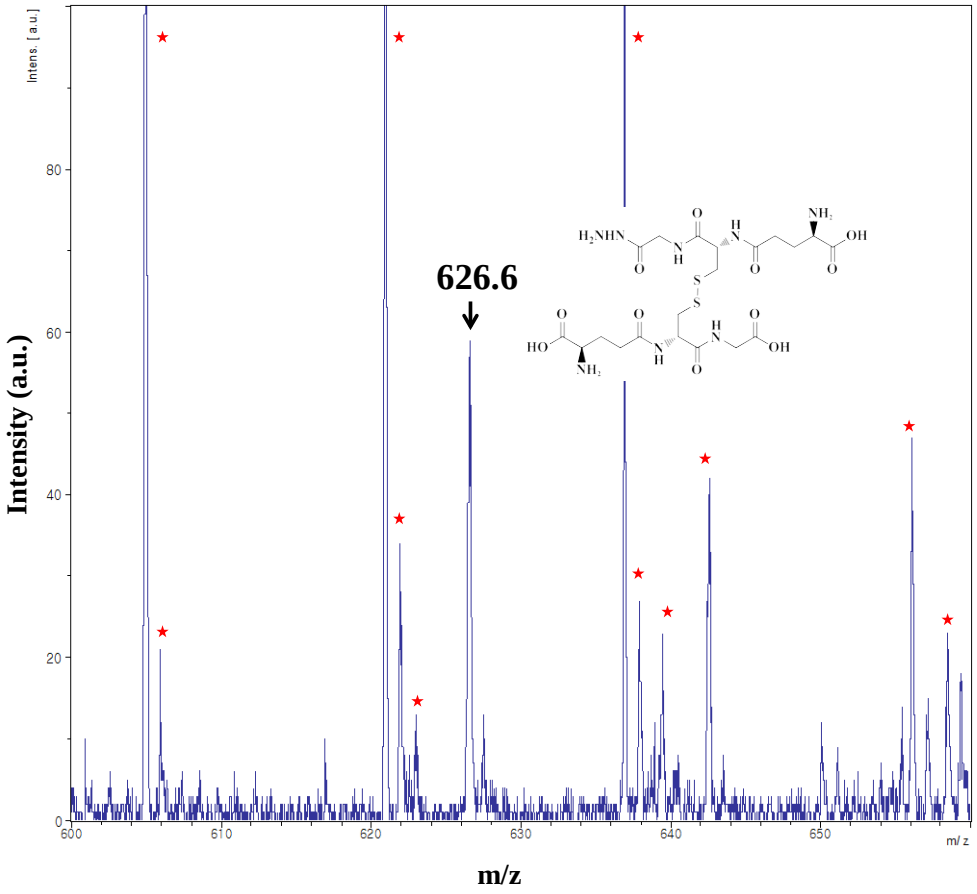

Fig. S1 Mass spectrum of the ligands released from the hydrazide-NP product collected using aMALDI-TOF Mass Spectrometer (Bruker Daltonics LRF20). The liberated ligands were obtained by using excess KI/I_2 to decompose the hydrazide NPs and separated by filtration. The peak at m/z 626.6 corresponds to the structure shown on the spectrum. ★denotes the matrix (α-cyano-4-hydroxycinnamic acid) peaks.

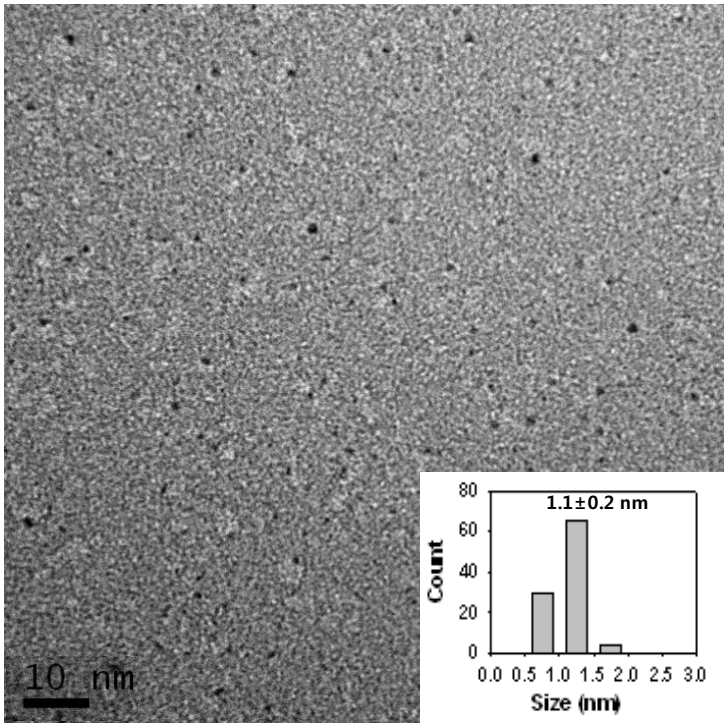

Fig. S2 TEM image of hydrazide-NPs obtained with a JEOL transmission electron microscope (JEM-2011).

Table S1 List of identified peptides from standard samples captured by commercial resin bead (glycopeptides were marked in bold lines).

No.	Probability	Identified Peptide Sequence
1	0.9628	**R.n[44.01]QLAHQ[129.04]SN[115.03]STN[115.03]IFFSPVSIATAFAMLSLGTK.A**
2	0.9634	**R.n[44.01]QLAHQSN[115.03]STN[115.03]IFFSPVSIATAFAM[147.04]LSLGTK.A**
3	0.97	K.AVLTIDEK.G
4	0.971	K.VVNPTQK.-
5	0.9747	K.n[44.01]DTEEEDFHVDQ[129.04]VTTVK.V
6	0.9754	K.QINDYVEK.G
7	0.9758	K.C[160.03]C[160.03]TESLVNR.R
8	0.9791	K.n[44.01]GTEAAGAM[147.04]FLEAIPM[147.04]SIPPEVK.F
9	0.9805	K.SVLGQLGITK.V
10	0.9807	K.LSITGTYDLK.S
11	0.9821	K.YLGNATAIFFLPDEGK.L
12	0.9869	K.n[44.01]LSITGTYDLK.S
13	0.9878	K.C[160.03]C[160.03]TESLVN[115.03]R.R
14	0.9881	K.SPLFM[147.04]GK.V
15	0.9883	K.KQINDYVEK.G
16	0.9883	K.LSSWVLLM[147.04]K.Y
17	0.9889	K.RN[115.03]PQ[129.04]THLKDPDMVWDFW.S
18	0.9891	K.n[44.01]SVLGQLGITK.V
19	0.99	K.n[44.01]AVLTIDEK.G
20	0.9901	K.TGKPDYVTDSAASATAWSTGVKT.Y
21	0.9904	K.n[44.01]ITPNLAEFAFSLYR.Q
22	0.9904	V.RQ[129.04]LKEHAVEGDC[160.03]DFQ[129.04]LLK.L
23	0.9909	R.DTVFALVNYIFFK.G
24	0.991	R.n[44.01]SASLHLPK.L
25	0.991	K.YLYEIAR.R
26	0.9911	R.KVPQVSTPTLVEVSR.S
27	0.992	K.ITPNLAEFAFSLYR.Q
28	0.9921	K.ITPN[115.03]LAEFAFSLYR.Q
29	0.9926	R.LGM[147.04]FNIQHC[160.03]K.K
30	0.9961	K.n[44.01]EMFTVAEYWQNDLG.A
31	0.9994	K.n[44.01]ANREKM[147.04]TQIMFETFNVPA.M
32	1	K.MEEKYN[115.03]LTSVLM[147.04]AM[147.04]G.I
33	1	K.DTEEEDFHVDQVTTVK.V
34	1	K.n[44.01]DTEEEDFHVDQVTTVK.V
35	1	K.DTEEEDFHVDQ[129.04]VTTVK.V
36	1	K.LQHLENELTHDIITK.F
37	1	K.LYHSEAFTVNFGDTEEAKK.Q
38	1	K.VFSNGADLSGVTEEAPLK.L
39	1	K.VFSN[115.03]GADLSGVTEEAPLK.L

40	1	K.LYHSEAFTVNFGDTEEAK.K
41	1	K.n[44.01]VFSN[115.03]GADLSGVTEEAPLK.L
42	1	K.GTEAAGAM[147.04]FLEAIPM[147.04]SIPPEVK.F
43	1	**M.KYLGN[115.03]ATAIFFLPDEGK.L**
44	1	K.ELDRDTVFALVNY.I
45	1	**K.YLGN[115.03]ATAIFFLPDEGK.L**
46	1	K.n[44.01]LQHLENELTHDIITK.F
47	1	F.SPVSIATAFAM[147.04]LSLGTK.A
48	1	**K.YLGN[115.03]ATAIFFLPDEGKL.Q**
49	1	**Y.n[44.01]LGN[115.03]ATAIFFLPDEGK.L**
50	1	**K.n[44.01]YLGN[115.03]ATAIFFLPDEGK.L**
51	1	K.ELDRDTVFALVNYIFFK.G
52	1	R.n[44.01]LQ[129.04]N[115.03]DSAYLAEHGITAVW.I
53	1	A.n[44.01]AQQPDGLAVVGVFLKVGDANPALQK.V
54	1	D.AQGAMTKALELFRNDIAAK.Y

Table S2 List of identified peptides from standard samples captured by NP (glycopeptides were marked in bold lines).

No.	Probability	Identified Peptide Sequence
1	0.9514	K.DTEEEDFHVDQ[129.04]VTTVK.V
2	0.9518	**R.QLAHQSN[115.03]STNIFFSPVSIATAFAM[147.04]LSLGTK.A**
3	0.9591	K.AVLTIDEK.G
4	0.9637	K.VVNPTQK.-
5	0.9722	K.n[44.01]KLSSWVLLM[147.04]K.Y
6	0.9739	K.LSITGTYDLK.S
7	0.9748	K.YLGNATAIFFLPDEGK.L
8	0.976	K.YLYEIAR.R
9	0.9785	K.n[44.01]FNKPFVFLM[147.04]IEQNTK.S
10	0.9786	K.SPLFMGK.V
11	0.9791	K.SPLFM[147.04]GK.V
12	0.9822	**K.YLGN[115.03]ATAIFFLPDEGK.L**
13	0.9834	R.n[44.01]SASLHLPK.L
14	0.9843	K.n[44.01]AVLTIDEK.G
15	0.9848	**K.n[44.01]YLGN[115.03]ATAIFFLPDEGK.L**
16	0.9849	K.SVLGQLGITK.V
17	0.9849	K.n[44.01]YLGNATAIFFLPDEGK.L
18	0.9876	K.C[160.03]C[160.03]TESLVNR.R
19	0.9878	K.n[44.01]LQHLENELTHDIITK.F
20	0.9886	K.KQINDYVEK.G
21	0.9889	K.ITPNLAEFAFSLYR.Q
22	0.9892	K.LSSWVLLM[147.04]K.Y
23	0.9893	R.n[44.01]KVPQVSTPTLVEVSR.S
24	0.9909	R.n[44.01]LGM[147.04]FNIQHC[160.03]K.K
25	0.9924	R.DTVFALVNYIFFK.G
26	1	F.TVNFGDTEEAKK.Q
27	1	K.LQHLENELTH.D
28	1	R.LGM[147.04]FNIQHC[160.03]K.K
29	1	E.NELTHDIITK.F
30	1	K.SPLFM[147.04]GKVVNPTQK.-
31	1	Q.HLENELTHDIITK.F
32	1	K.DTEEEDFHVDQVTTVK.V
33	1	H.LENELTHDIITK.F
34	1	S.NGADLSGVTEEAPLK.L
35	1	K.n[44.01]DTEEEDFHVDQVTTVK.V
36	1	R.KVPQVSTPTLVEVSR.S
37	1	K.LQHLENELTHDIITK.F
38	1	H.SEAFTVNFGDTEEAKK.Q
39	1	K.LYHSEAFTVNFGDTEEAKK.Q
40	1	K.VPQVSTPTLVEVSR.S
41	1	K.VFSNGADLSGVTEEAPLK.L
42	1	K.VFSN[115.03]GADLSGVTEEAPLK.L
43	1	K.LYHSEAFTVNFGDTEEAK.K
44	1	K.VFSNGADLSGVTEEAPLKLSK.A

45	1	K.KLSSWVLLM[147.04]K.Y
46	1	K.VFSN[115.03]GADLSGVTEEAPLKLSK.A
47	1	S.IATAFAM[147.04]LSLGTK.A
48	1	Q.LTTGNGLFLSEGLK.L
49	1	Q.LTTGN[115.03]GLFLSEGLK.L
50	1	K.FNKPFVFLM[147.04]IEQNTK.S
51	1	S.QLQLTTGNGLFLSEGLK.L
52	1	**L.GN[115.03]ATAIFFLPDEGK.L**
53	1	K.GTEAAGAM[147.04]FLEAIPM[147.04]SIPPEVK.F
54	1	R.TLNQPDSQLQLTTGNGLFLSEGLK.L
55	1	T.LNQPDSQLQLTTGNGLFLSEGLK.L
56	1	**M.KYLGN[115.03]ATAIFFLPDEGK.L**
57	1	K.ELDRDTVFALVN[115.03]Y.I
58	1	**Y.LGN[115.03]ATAIFFLPDEGK.L**
59	1	K.FNKPFVFLMIEQNTK.S
60	1	K.LSITGTYDLKSVLGQLGITK.V
61	1	**K.YLGN[115.03]ATAIFFLPDEGKLQ[129.04].H**
62	1	F.SPVSIATAFAM[147.04]LSLGTK.A
63	1	**K.YLGN[115.03]ATAIFFLPDEGKL.Q**
64	1	**Y.n[44.01]LGN[115.03]ATAIFFLPDEGK.L**
65	1	F.SPVSIATAFAMLSLGTK.A
66	1	K.ELDRDTVFALVNYIFFK.G
67	1	R.QLAHQSNSTNIFFSPVSIATAFAM[147.04]LSLGTK.A
68	1	N.IFFSPVSIATAFAM[147.04]LSLGTK.A
69	1	S.VSAEFQ[129.04]LSAGR.Y
70	1	K.RN[115.03]PQ[129.04]THLKDPDMVWDFW.S

Table S3 List of identified peptides from standard samples captured by NP with modified washing steps (glycopeptides were marked in bold lines).

No	Probability	Identified Peptide Sequence	Protein
1	0.96	K.n[44.01]AALAAFNAQNNGSNFQ[129.04]LEEISR.A	sp|P02765|FETUA_HUMAN
2	0.9627	K.VC[160.03]QDC[160.03]PLLAPLNDTR.V	sp|P02765|FETUA_HUMAN
3	0.9648	**K.n[44.01]AALAAFNAQN[115.03]N[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
4	0.9664	**K.AALAAFNAQNN[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
5	0.9686	K.AALAAFNAQN[115.03]NGSN[115.03]FQLEEISR.A	sp|P02765|FETUA_HUMAN
6	0.9706	K.AALAAFNAQNNGSN[115.03]FQLEEISR.A	sp|P02765|FETUA_HUMAN
7	0.9725	**K.AALAAFNAQNN[115.03]GSNFQ[129.04]LEEISR.A**	sp|P02765|FETUA_HUMAN
8	0.9764	K.n[44.01]SVLGQLGITK.V	sp|P01009|A1AT_HUMAN
9	0.9839	R.n[44.01]SASLHLPK.L	sp|P01009|A1AT_HUMAN
10	0.9854	**R.n[44.01]KVC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
11	0.9869	K.GTEAAGAM[147.04]FLEAIPM[147.04]SIPPEVK.F	sp|P01009|A1AT_HUMAN
12	0.9901	**K.n[44.01]VC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
13	1	K.HTLNQIDEVK.V	sp|P02765|FETUA_HUMAN
14	1	P.HGPGLIYR.Q	sp|P02765|FETUA_HUMAN
15	1	K.DTEEEDFHVDQVTTVK.V	sp|P01009|A1AT_HUMAN
16	1	**P.LLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
17	1	**D.C[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
18	1	K.VFSNGADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
19	1	K.VFSN[115.03]GADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
20	1	**R.KVC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
21	1	**Q.DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
22	1	**K.YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
23	1	**K.n[44.01]YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
24	1	L.M[147.04]KYLGNATAIFFLPDEGK.L	sp|P01009|A1AT_HUMAN
25	1	**L.LM[147.04]KYLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
26	1	**M.n[44.01]KYLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
27	1	K.AALAAFNAQNNGSNFQLEEISR.A	sp|P02765|FETUA_HUMAN
28	1	**L.n[44.01]LMKYLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
29	1	R.ELEELN[115.03]VPGEIVESLSSSEESI.T	P02666|CASB_BOVIN

Table S4 Reproducibility of non-specific binding removal efficiency using new washing method (1M NaCl, 6M Urea)

4.1. Number of identified peptides and glycosites using new washing (NW) method (1M NaCl, 6M Urea) compared with original MeOH washing step.

	Experiment 1		Experiment 2	
Washing method	MeOH	NW	MeOH	NW
# unique peptides	74	47	95	48
# glycosites	3	3	3	4
Using NW, the number of non-specific binding reduces ~30-40% in comparison with washing with MeOH only				

4.2. List of identified peptides obtained in Experiment 1 washed by MeOH only(glycopeptides were marked in bold lines)

No	Probability	Identified Peptide Sequence	Protein
1	0.9508	K.SVLGQLGITK.V	sp|P01009|A1AT_HUMAN
2	0.959	K.FLENEDRR.S	sp|P01009|A1AT_HUMAN
3	0.959	K.HTLN[115.03]QIDEVK.V	sp|P02765|FETUA_HUMAN
4	0.9592	K.YLGNATAIFFLPDEGK.L	sp|P01009|A1AT_HUMAN
5	0.9612	**K.n[44.01]AALAAFNAQNN[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
6	0.964	R.QPNC[160.03]DDPETEEAALVAIDYINQN[115.03]LPWGYK.H	sp|P02765|FETUA_HUMAN
7	0.968	K.YLYEIAR.R	P02769|ALBU_BOVIN
8	0.9711	K.n[44.01]AALAAFNAQN[115.03]NGSNFQ[129.04]LEEISR.A	sp|P02765|FETUA_HUMAN
9	0.9747	R.QPNC[160.03]DDPETEEAALVAIDYIN[115.03]Q[129.04]NLPWGYK.H	sp|P02765|FETUA_HUMAN
10	0.9749	K.n[44.01]FLENEDRR.S	sp|P01009|A1AT_HUMAN
11	0.9761	**K.n[44.01]VC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
12	0.9761	**K.AALAAFNAQNN[115.03]GSNFQ[129.04]LEEISR.A**	sp|P02765|FETUA_HUMAN
13	0.9777	**K.AALAAFNAQNN[115.03]GSN[115.03]FQLEEISR.A**	sp|P02765|FETUA_HUMAN
14	0.9779	**K.AALAAFNAQNN[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
15	0.9783	K.n[44.01]VFSNGADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
16	0.9819	K.n[44.01]VC[160.03]QDC[160.03]PLLAPLNDTR.V	sp|P02765|FETUA_HUMAN
17	0.9847	K.VVNPTQK.-	sp|P01009|A1AT_HUMAN
18	0.9854	K.FLEN[115.03]EDRR.S	sp|P01009|A1AT_HUMAN
19	0.9855	K.n[44.01]LQHLENELTHDIITK.F	sp|P01009|A1AT_HUMAN
20	0.9879	K.FN[115.03]KPFVFLMIEQ[129.04]N[115.03]TK.S	sp|P01009|A1AT_HUMAN
21	0.9879	K.n[44.01]SVLGQLGITK.V	sp|P01009|A1AT_HUMAN
22	0.9885	K.n[44.01]FNKPFVFLM[147.04]IEQNTK.S	sp|P01009|A1AT_HUMAN
23	0.9887	K.QINDYVEK.G	sp|P01009|A1AT_HUMAN

24	0.989	K.n[44.01]KLSSWVLLM[147.04]K.Y	sp|P01009|A1AT_HUMAN
25	0.9902	K.SPLFM[147.04]GK.V	sp|P01009|A1AT_HUMAN
26	0.9919	**R.n[44.01]KVC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
27	0.9925	K.n[44.01]YLGNATAIFFLPDEGK.L	sp|P01009|A1AT_HUMAN
28	0.9939	R.AQ[129.04]LVPLPPSTYVEFTVSGTDC[160.03]VAK.E	sp|P02765|FETUA_HUMAN
29	0.9939	K.n[44.01]AALAAFNAQNNGSN[115.03]FQLEEISR.A	sp|P02765|FETUA_HUMAN
30	0.994	K.FSVVYAK.C	sp|P02765|FETUA_HUMAN
31	0.994	K.LSSWVLLM[147.04]K.Y	sp|P01009|A1AT_HUMAN
32	0.9942	K.KQINDYVEK.G	sp|P01009|A1AT_HUMAN
33	1	K.C[160.03]DSSPDSAEDVRK.V	sp|P02765|FETUA_HUMAN
34	1	K.n[44.01]TDTSHHDQDHPTFNK.I	sp|P01009|A1AT_HUMAN
35	1	K.C[160.03]DSSPDSAEDVR.K	sp|P02765|FETUA_HUMAN
36	1	K.HTLNQIDEVK.V	sp|P02765|FETUA_HUMAN
37	1	Y.KHTLNQIDEVK.V	sp|P02765|FETUA_HUMAN
38	1	C.HVLDPTPVAR.C	sp|P02765|FETUA_HUMAN
39	1	H.VLDPTPVAR.C	sp|P02765|FETUA_HUMAN
40	1	S.ASLHLPK.L	sp|P01009|A1AT_HUMAN
41	1	K.LQHLENELTH.D	sp|P01009|A1AT_HUMAN
42	1	G.AAAGPVVPPC[160.03]PGR.I	sp|P02765|FETUA_HUMAN
43	1	S.APHGPGLIYR.Q	sp|P02765|FETUA_HUMAN
44	1	P.HGPGLIYR.Q	sp|P02765|FETUA_HUMAN
45	1	R.LGM[147.04]FNIQHC[160.03]K.K	sp|P01009|A1AT_HUMAN
46	1	E.NELTHDIITK.F	sp|P01009|A1AT_HUMAN
47	1	P.n[44.01]HGPGLIYR.Q	sp|P02765|FETUA_HUMAN
48	1	R.n[44.01]SASLHLPK.L	sp|P01009|A1AT_HUMAN
49	1	S.n[44.01]APHGPGLIYR.Q	sp|P02765|FETUA_HUMAN
50	1	K.DTEEEDFHVDQVTTVK.V	sp|P01009|A1AT_HUMAN
51	1	T.VVQPSVGAAAGPVVPPC[160.03]PGR.I	sp|P02765|FETUA_HUMAN
52	1	R.KVPQVSTPTLVEVSR.S	P02769|ALBU_BOVIN
53	1	K.EHAVEGDC[160.03]DFQLLK.L	sp|P02765|FETUA_HUMAN
54	1	K.VPQVSTPTLVEVSR.S	P02769|ALBU_BOVIN
55	1	K.KLSSWVLLM[147.04]K.Y	sp|P01009|A1AT_HUMAN
56	1	K.n[44.01]EHAVEGDC[160.03]DFQ[129.04]LLK.L	sp|P02765|FETUA_HUMAN
57	1	K.VFSNGADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
58	1	**D.C[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
59	1	K.n[44.01]EHAVEGDC[160.03]DFQLLK.L	sp|P02765|FETUA_HUMAN
60	1	K.VFSN[115.03]GADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
61	1	**R.KVC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
62	1	**K.VC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
63	1	**Q.DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
64	1	K.FNKPFVFLM[147.04]IEQNTK.S	sp|P01009|A1AT_HUMAN
65	1	K.GTEAAGAM[147.04]FLEAIPM[147.04]SIPPEVK.F	sp|P01009|A1AT_HUMAN
66	1	N.LAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
67	1	R.AQLVPLPPSTYVEFTVSGTDC[160.03]VAK.E	sp|P02765|FETUA_HUMAN

68	1	**K.YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
69	1	**K.YLGN[115.03]ATAIFFLPDEGKLQ[129.04].H**	sp|P01009|A1AT_HUMAN
70	1	F.SPVSIATAFAM[147.04]LSLGTK.A	sp|P01009|A1AT_HUMAN
71	1	K.ITPNLAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
72	1	K.ITPN[115.03]LAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
73	1	**K.n[44.01]YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
74	1	K.AALAAFNAQNNGSNFQLEEISR.A	sp|P02765|FETUA_HUMAN

4.3. List of identified peptides obtained in Experiment 1 with new washing method (glycopeptides were marked in bold lines)

No	Probability	Identified Peptide Sequence	Protein
1	0.9627	K.PDYVTDSAASATAWSTGVKTYNGAL.G	P00634|PPB_ECOLI
2	0.9649	K.n[44.01]HTLNQIDEVK.V	sp|P02765|FETUA_HUMAN
3	0.966	K.n[44.01]ISQAVHAAHAEINEAGR.E	P01012|OVAL_CHICK
4	0.9674	K.n[44.01]AALAAFNAQNNGSN[115.03]FQLEEISR.A	sp|P02765|FETUA_HUMAN
5	0.9708	K.LSSWVLLM[147.04]K.Y	sp|P01009|A1AT_HUMAN
6	0.9724	**K.AALAAFNAQNN[115.03]GSN[115.03]FQLEEISR.A**	sp|P02765|FETUA_HUMAN
7	0.9735	**K.n[44.01]YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
8	0.9758	K.FLEDVKK.L	sp|P01009|A1AT_HUMAN
9	0.9758	K.YLGNATAIFFLPDEGK.L	sp|P01009|A1AT_HUMAN
10	0.9762	**K.AALAAFNAQNN[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
11	0.9771	K.FNKPFVFLM[147.04]IEQNTK.S	sp|P01009|A1AT_HUMAN
12	0.9785	**K.AALAAFNAQN[115.03]N[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
13	0.979	K.n[44.01]YPIEHGIITN[115.03]WDDM.E	P62739|ACTA_BOVIN
14	0.9796	K.VVNPTQK.-	sp|P01009|A1AT_HUMAN
15	0.9821	K.LSITGTYDLK.S	sp|P01009|A1AT_HUMAN
16	0.983	K.QINDYVEK.G	sp|P01009|A1AT_HUMAN
17	0.9864	K.SPLFM[147.04]GK.V	sp|P01009|A1AT_HUMAN
18	1	L.DPTPVAR.C	sp|P02765|FETUA_HUMAN
19	1	K.HTLNQIDEVK.V	sp|P02765|FETUA_HUMAN
20	1	S.ASLHLPK.L	sp|P01009|A1AT_HUMAN
21	1	E.NELTHDIITK.F	sp|P01009|A1AT_HUMAN
22	1	A.PHGPGLIYR.Q	sp|P02765|FETUA_HUMAN
23	1	R.n[44.01]SASLHLPK.L	sp|P01009|A1AT_HUMAN
24	1	K.DTEEEDFHVDQVTTVK.V	sp|P01009|A1AT_HUMAN
25	1	S.VLGQLGITK.V	sp|P01009|A1AT_HUMAN
26	1	K.EHAVEGDC[160.03]DFQLLK.L	sp|P02765|FETUA_HUMAN
27	1	**D.C[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
28	1	K.VFSNGADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
29	1	K.VFSN[115.03]GADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
30	1	**R.n[44.01]KVC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN

31	1	K.n[44.01]SVLGQLGITK.V	sp|P01009|A1AT_HUMAN
32	1	K.n[44.01]SVLGQ[129.04]LGITK.V	sp|P01009|A1AT_HUMAN
33	1	**K.n[44.01]VC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
34	1	**L.GN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
35	1	H.n[44.01]AAKAALAAFNAQNNGSNFQLEEISR.A	sp|P02765|FETUA_HUMAN
36	1	**Y.LGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
37	1	K.AALAAFNAQNNGSNFQLEEISR.A	sp|P02765|FETUA_HUMAN
38	1	F.ALVNYIFFK.G	sp|P01009|A1AT_HUMAN
39	1	**K.YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
40	1	L.n[44.01]MKYLGNATAIFFLPDEGK.L	sp|P01009|A1AT_HUMAN
41	1	**L.LM[147.04]KYLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
42	1	**M.n[44.01]KYLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
43	1	**L.n[44.01]LM[147.04]KYLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
44	1	**K.YLGN[115.03]ATAIFFLPDEGKLQ[129.04].H**	sp|P01009|A1AT_HUMAN
45	1	K.ITPNLAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
46	1	F.n[44.01]ALVNYIFFK.G	sp|P01009|A1AT_HUMAN
47	1	N.NGHSFNVEYDDSQDK.A	P00921|CAH2_BOVIN

4.4. List of identified peptides obtained in Experiment 2washed by MeOH only(glycopeptides were marked in bold lines)

No	Probability	Identified Peptide Sequence	Protein
1	0.9522	**K.n[44.01]AALAAFNAQNN[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
2	0.9532	K.AALAAFN[115.03]AQN[115.03]NGSNFQ[129.04]LEEISR.A	sp|P02765|FETUA_HUMAN
3	0.9535	**K.n[44.01]AALAAFNAQN[115.03]N[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
4	0.9547	R.QPNC[160.03]DDPETEEAALVAIDYINQN[115.03]LPWGYK.H	sp|P02765|FETUA_HUMAN
5	0.9555	K.AALAAFNAQN[115.03]NGSNFQ[129.04]LEEISR.A	sp|P02765|FETUA_HUMAN
6	0.9586	K.VC[160.03]QDC[160.03]PLLAPLNDTR.V	sp|P02765|FETUA_HUMAN
7	0.9588	M.n[44.01]TM[147.04]ITDSLAVVLQ[129.04]RR.D	P00722|BGAL_ECOLI
8	0.9593	**K.AALAAFNAQNN[115.03]GSNFQ[129.04]LEEISR.A**	sp|P02765|FETUA_HUMAN
9	0.9593	K.EPISVSSQ[129.04]Q[129.04]MLKFRT.L	P00921|CAH2_BOVIN
10	0.9649	K.C[160.03]NLLAEK.Q	sp|P02765|FETUA_HUMAN
11	0.9656	K.n[44.01]FNKPFVFLM[147.04]IEQNTK.S	sp|P01009|A1AT_HUMAN
12	0.9669	R.n[44.01]LGM[147.04]FNIQHC[160.03]K.K	sp|P01009|A1AT_HUMAN
13	0.9694	K.n[44.01]AALAAFNAQNNGSN[115.03]FQLEEISR.A	sp|P02765|FETUA_HUMAN
14	0.9703	K.VVNPTQK.-	sp|P01009|A1AT_HUMAN
15	0.9717	**K.AALAAFNAQNN[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
16	0.9734	A.n[44.01]GDIVSLRDVIESDKSTLLGEAVAK.R	P00946|MANA_ECOLI
17	0.9784	K.n[44.01]VFSN[115.03]GADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
18	0.9816	R.AQ[129.04]LVPLPPSTYVEFTVSGTDC[160.03]VAK.E	sp|P02765|FETUA_HUMAN
19	0.9824	**K.AALAAFNAQN[115.03]N[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
20	0.9832	K.VWPQQPSGELFEIEIDTLETTC[160.03]HVLDPTPVAR.C	sp|P02765|FETUA_HUMAN

21	0.9839	**R.KVC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
22	0.9841	K.n[44.01]LC[160.03]MGSGLN[115.03]LC[160.03]EPN[115.03]N[115.03]K.E	sp|P02787|TRFE_HUMAN
23	0.9861	K.AALAAFNAQNNGSN[115.03]FQLEEISR.A	sp|P02765|FETUA_HUMAN
24	0.9862	K.YLYEIAR.R	P02769|ALBU_BOVIN
25	0.9881	K.n[44.01]EHAVEGDC[160.03]DFQ[129.04]LLK.L	sp|P02765|FETUA_HUMAN
26	0.9886	K.n[44.01]LSSWVLLM[147.04]K.Y	sp|P01009|A1AT_HUMAN
27	0.9892	K.n[44.01]FSVVYAK.C	sp|P02765|FETUA_HUMAN
28	0.9894	K.C[160.03]C[160.03]TESLVNR.R	P02769|ALBU_BOVIN
29	0.9897	K.n[44.01]AALAAFNAQNNGSNFQLEEISR.A	sp|P02765|FETUA_HUMAN
30	0.9901	K.QINDYVEK.G	sp|P01009|A1AT_HUMAN
31	0.9915	K.n[44.01]SVLGQ[129.04]LGITK.V	sp|P01009|A1AT_HUMAN
32	0.9915	K.ITPNLAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
33	0.992	K.DTEEEDFHVDQ[129.04]VTTVK.V	sp|P01009|A1AT_HUMAN
34	0.9924	K.SPLFM[147.04]GK.V	sp|P01009|A1AT_HUMAN
35	0.993	K.LSITGTYDLK.S	sp|P01009|A1AT_HUMAN
36	0.9931	K.n[44.01]SVLGQLGITK.V	sp|P01009|A1AT_HUMAN
37	0.9978	K.VWPQ[129.04]Q[129.04]PSGELFEIEIDTLETTC[160.03]HVLDPTPVAR.C	sp|P02765|FETUA_HUMAN
38	1	A.n[44.01]TAGEWQ[129.04]GK.T	P00634|PPB_ECOLI
39	1	K.C[160.03]DSSPDSAEDVR.K	sp|P02765|FETUA_HUMAN
40	1	K.KQINDYVEK.G	sp|P01009|A1AT_HUMAN
41	1	K.HTLNQIDEVK.V	sp|P02765|FETUA_HUMAN
42	1	H.VLDPTPVAR.C	sp|P02765|FETUA_HUMAN
43	1	P.HGPGLIYR.Q	sp|P02765|FETUA_HUMAN
44	1	A.AAGPVVPPC[160.03]PGR.I	sp|P02765|FETUA_HUMAN
45	1	K.LQHLENELTH.D	sp|P01009|A1AT_HUMAN
46	1	A.PHGPGLIYR.Q	sp|P02765|FETUA_HUMAN
47	1	S.APHGPGLIYR.Q	sp|P02765|FETUA_HUMAN
48	1	R.LGM[147.04]FNIQHC[160.03]K.K	sp|P01009|A1AT_HUMAN
49	1	E.NELTHDIITK.F	sp|P01009|A1AT_HUMAN
50	1	P.n[44.01]HGPGLIYR.Q	sp|P02765|FETUA_HUMAN
51	1	K.FSVVYAK.C	sp|P02765|FETUA_HUMAN
52	1	R.n[44.01]SASLHLPK.L	sp|P01009|A1AT_HUMAN
53	1	K.DTEEEDFHVDQVTTVK.V	sp|P01009|A1AT_HUMAN
54	1	T.VVQPSVGAAAGPVVPPC[160.03]PGR.I	sp|P02765|FETUA_HUMAN
55	1	H.LENELTHDIITK.F	sp|P01009|A1AT_HUMAN
56	1	R.KVPQVSTPTLVEVSR.S	P02769|ALBU_BOVIN
57	1	K.LQHLENELTHDIITK.F	sp|P01009|A1AT_HUMAN
58	1	K.EHAVEGDC[160.03]DFQLLK.L	sp|P02765|FETUA_HUMAN
59	1	K.VPQVSTPTLVEVSR.S	P02769|ALBU_BOVIN
60	1	K.VFSNGADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
61	1	K.KLSSWVLLM[147.04]K.Y	sp|P01009|A1AT_HUMAN
62	1	K.VFSN[115.03]GADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
63	1	K.n[44.01]EHAVEGDC[160.03]DFQLLK.L	sp|P02765|FETUA_HUMAN
64	1	K.LSSWVLLM[147.04]K.Y	sp|P01009|A1AT_HUMAN

65	1	**Q.DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
66	1	**K.VC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
67	1	Q.LTTGN[115.03]GLFLSEGLK.L	sp|P01009|A1AT_HUMAN
68	1	**K.n[44.01]VC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
69	1	K.FNKPFVFLM[147.04]IEQNTK.S	sp|P01009|A1AT_HUMAN
70	1	K.n[44.01]VFSNGADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
71	1	K.GTEAAGAM[147.04]FLEAIPM[147.04]SIPPEVK.F	sp|P01009|A1AT_HUMAN
72	1	N.LAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
73	1	R.AQLVPLPPSTYVEFTVSGTDC[160.03]VAK.E	sp|P02765|FETUA_HUMAN
74	1	**Y.LGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
75	1	K.ELDRDTVFALVNY.I	sp|P01009|A1AT_HUMAN
76	1	K.AALAAFNAQNNGSNFQLEEISR.A	sp|P02765|FETUA_HUMAN
77	1	**K.YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
78	1	K.FNKPFVFL.M	sp|P01009|A1AT_HUMAN
79	1	**M.n[44.01]KYLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
80	1	K.n[44.01]LQHLENELTHDIITK.F	sp|P01009|A1AT_HUMAN
81	1	**K.YLGN[115.03]ATAIFFLPDEGKLQ[129.04].H**	sp|P01009|A1AT_HUMAN
82	1	F.SPVSIATAFAM[147.04]LSLGTK.A	sp|P01009|A1AT_HUMAN
83	1	**K.YLGN[115.03]ATAIFFLPDEGKL.Q**	sp|P01009|A1AT_HUMAN
84	1	K.ITPN[115.03]LAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
85	1	**K.n[44.01]YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
86	1	K.n[44.01]ITPN[115.03]LAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
87	1	K.n[44.01]ITPNLAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
88	1	Q.n[44.01]SEEQQQTEDELQDK.I	P02666|CASB_BOVIN
89	1	S.n[44.01]ALAMVYLGAKDSTRTQINK.V	P01012|OVAL_CHICK
90	1	K.n[44.01]DAFLGSFLYEYSRRHPEYA.V	P02769|ALBU_BOVIN
91	1	L.LESVTWIVLKEPISVSSQQM[147.04]LK.F	P00921|CAH2_BOVIN
92	1	L.LESVTWIVLKEPISVSSQQM[147.04]LKFR.T	P00921|CAH2_BOVIN
93	1	A.n[44.01]NEADAVTLDAGLVYDAYLAPN[115.03]N[115.03]LK.P	sp|P02787|TRFE_HUMAN
94	1	K.ITLSQVGDVLRALGTNP.T	P02602|MLE1_RABIT
95	1	A.n[44.01]EGAGGFFKGIDALPLTGQYTHYALNK.K	P00634|PPB_ECOLI

4.5.List of identified peptides obtained in Experiment 1 with new washing method (glycopeptides were marked in bold lines)

No	Probability	Identified Peptide Sequence	Protein
1	0.9529	K.n[44.01]AALAAFNAQNNGSN[115.03]FQLEEISR.A	sp|P02765|FETUA_HUMAN
2	0.9538	**K.AALAAFNAQNN[115.03]GSNFQLEEISR.A**	sp|P02765|FETUA_HUMAN
3	0.9614	K.AALAAFNAQN[115.03]NGSN[115.03]FQLEEISR.A	sp|P02765|FETUA_HUMAN
4	0.9627	R.n[44.01]HPYFYAPELLYYAN[115.03]K.Y	P02769|ALBU_BOVIN
5	0.9668	R.n[44.01]ALGTN[115.03]PTN[115.03]AEVK.K	P02602|MLE1_RABIT

6	0.9674	K.LQHLENELTHDIITK.F	sp|P01009|A1AT_HUMAN
7	0.9694	A.n[44.01]GGFFKGIDALPLTGQYTHYALNK.K	P00634|PPB_ECOLI
8	0.9705	K.n[44.01]SVLGQLGITK.V	sp|P01009|A1AT_HUMAN
9	0.9741	K.AALAAFNAQN[115.03]NGSNFQ[129.04]LEEISR.A	sp|P02765|FETUA_HUMAN
10	0.9759	K.QINDYVEK.G	sp|P01009|A1AT_HUMAN
11	0.9795	K.VC[160.03]QDC[160.03]PLLAPLNDTR.V	sp|P02765|FETUA_HUMAN
12	0.9824	**K.n[44.01]YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
13	0.9852	A.n[44.01]HLC[160.03]IAGSHAVN[115.03]GVARIHSEILKK.T	P00489|PYGM_RABIT
14	0.9931	K.LPGFGDSIEAQ[129.04]C[160.03]GTSVN[115.03].V	P01012|OVAL_CHICK
15	1	K.HTLNQIDEVK.V	sp|P02765|FETUA_HUMAN
16	1	V.n[44.01]EKGGKHK.T	P62894|CYC_BOVIN
17	1	G.AAAGPVVPPC[160.03]PGR.I	sp|P02765|FETUA_HUMAN
18	1	P.HGPGLIYR.Q	sp|P02765|FETUA_HUMAN
19	1	S.APHGPGLIYR.Q	sp|P02765|FETUA_HUMAN
20	1	E.NELTHDIITK.F	sp|P01009|A1AT_HUMAN
21	1	R.n[44.01]SASLHLPK.L	sp|P01009|A1AT_HUMAN
22	1	S.n[44.01]APHGPGLIYR.Q	sp|P02765|FETUA_HUMAN
23	1	**P.LLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
24	1	N.GSNFQLEEISR.A	sp|P02765|FETUA_HUMAN
25	1	K.LSITGTYDLK.S	sp|P01009|A1AT_HUMAN
26	1	**D.C[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
27	1	K.VFSNGADLSGVTEEAPLK.L	sp|P01009|A1AT_HUMAN
28	1	V.EGPKLVVSTQTALA.-	P02769|ALBU_BOVIN
29	1	**R.KVC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
30	1	**K.VC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
31	1	K.LSSWVLLM[147.04]K.Y	sp|P01009|A1AT_HUMAN
32	1	**R.n[44.01]KVC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
33	1	**Q.DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
34	1	**K.n[44.01]VC[160.03]Q[129.04]DC[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
35	1	**D.n[44.01]C[160.03]PLLAPLN[115.03]DTR.V**	sp|P02765|FETUA_HUMAN
36	1	**L.GN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
37	1	**G.N[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
38	1	**Y.LGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
39	1	F.ALVN[115.03]YIFFK.G	sp|P01009|A1AT_HUMAN
40	1	K.YLGNATAIFFLPDEGK.L	sp|P01009|A1AT_HUMAN
41	1	**K.YLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
42	1	**L.n[44.01]LM[147.04]KYLGN[115.03]ATAIFFLPDEGK.L**	sp|P01009|A1AT_HUMAN
43	1	**K.YLGN[115.03]ATAIFFLPDEGKL.Q**	sp|P01009|A1AT_HUMAN
44	1	K.ITPNLAEFAFSLYR.Q	sp|P01009|A1AT_HUMAN
45	1	K.AALAAFNAQNNGSNFQLEEISR.A	sp|P02765|FETUA_HUMAN

46	1	**R.n[44.01]QLAHQSN[115.03]STNIFFSPVSIATAF.A**	sp|P01009|A1AT_HUMAN
47	1	K.LSITGTYDLKSVLGQLGITKVFSN.G	sp|P01009|A1AT_HUMAN
48	1	K.n[44.01]IC[160.03]GGWQMEEADDWL.R	P00489|PYGM_RABIT

Table S5 List of identified glycoproteins from rat kidney tissue captured by NP with modified washing steps

No.	Protein	Description	Peptide Sequence
1	IPI00189714	Col12a1 collagen alpha-1(XII) chain	EAGN[115]ITTDGYEILGK
2	IPI00192845	P2rx4 P2X purinoceptor	N[115]ILPN[115]ITTSYLK
3	IPI00196620	CubnCubilin	EYN[115]QTFGNLK
4	IPI00198080	Pcyox1 Prenylcysteine oxidase	GELN[115]STLFSSR
5	IPI00199448	Lgals3bp Galectin-3-binding protein	ALGYEN[115]ATQALSR
6	IPI00199867	Emilin1 Putative uncharacterized protein Emilin1	LGALN[115]SSLLLLEDR
7	IPI00204348	Nt5e 5'-nucleotidase	LDN[115]YSTQELGR
8	IPI00206254	Ggt1 Gamma-glutamyltranspeptidase 1	AFYN[115]GSLTAQIVK
9	IPI00210975	Hyou1 Hypoxia up-regulated protein 1	EN[115]GTDAVQEEEESPAEGSK
10	IPI00231478	Scarb2 Lysosome membrane protein 2	N[115]QSVGDPTVDLIR
11	IPI00324102	Fgl2 fibrinogen-like 2	VAN[115]LTSVVNSLDSK
12	IPI00324585	Itga1 Integrin alpha-1	VYVYAVN[115]QTR
13	IPI00327469	Ahsg Alpha-2-HS-glycoprotein	FN[115]DTN[115]VVHTVK
14	IPI00359123	RGD1310427 Putative uncharacterized protein RGD1310427	FIN[115]YN[115]QTVSR
15	IPI00369539	Mfap4 Microfibrillar-associated protein 4	VDLEDFEN[115]NTAYAK
16	IPI00369995	Lrp1 low density lipoprotein receptor-related protein 1	FN[115]STEYQVVTR
17	IPI00400747	Man2b1 Mannosidase	IENLEQN[115]ISLPVR
18	IPI00195148	Es1 Liver carboxylesterase 1	LDN[115]TSM[147]STVIDGVVLPK
19	IPI00200591	LOC299282 Serine protease inhibitor A3L	LINDYVSN[115]QTQGK
20	IPI00200593	Serpina3k Serine protease inhibitor A3K	FINDYVSN[115]QTQGK
21	IPI00327398	Enpep Isoform 1 of Glutamylaminopeptidase	QTAEYAAN[115]ITK
22	IPI00200640	Mucdhl Isoform 1 of Cadherin-related family member 5	EYN[115]VSEDTR
23	IPI00205389	Fgb Isoform 1 of Fibrinogen beta chain	GTAGN[115]ALM[147]EGASQLVGEN[115]R
24	IPI00758468	Pgcp Plasma glutamate carboxypeptidase	EVM[147]SLLQPLN[115]ITK
25	IPI00189058	A1bg Isoform 1 of Alpha-1B-glycoprotein	FSLGAITSN[115]NSGVYR
26	IPI00193869	Clptm1 Cleft lip and palate associated transmembrane protein 1	DYYPIN[115]ESLASLPLR
27	IPI00198405	ArsbArylsulfatase B	IYAGM[147]VSLLDEAVGN[115]VTK
28	IPI00201276	Acp2 Lysosomal acid phosphatase	YEQLQN[115]ETR
29	IPI00206336	Lamp1 Lysosome-associated membrane glycoprotein 1	VSN[115]M[147]TLPASAEVLK
30	IPI00211648	Slc3a1 Neutral and basic amino acid transport protein rBAT	NEIQVN[115]TSQIPDTVTR
31	IPI00326070	Ctsl1 Cathepsin L1	AEYAVAN[115]DTGFVDIPQQEK
32	IPI00358014	BtdBiotinidase	FN[115]DTEVLQR
33	IPI00369937	Pigs GPI transamidase component PIG-S	IYN[115]ASELPVR
34	IPI00371511	Creg1 Cellular repressor of E1A-stimulated genes 1	VN[115]ETEEGYAR
35	IPI00382223	RGD1308874 Isoform 2 of Adipocyte plasmamembrane-associated protein	VGPN[115]GTLFVVDAYK
36	IPI00464785	Ctsa Protective protein for beta-galactosidase	M[147]YVTN[115]DTEVAENNYQALK
37	IPI00190555	Folh1 Glutamate carboxypeptidase 2	FLYN[115]FTR

38	IPI00205325	Lrp2 Low-density lipoprotein receptor-related protein 2	YN[115]QSVSNPCK
39	IPI00208422	Dpp4 Dipeptidyl peptidase 4	LDFIVLN[115]ETR
40	IPI00325847	Cp GPI-anchored ceruloplasmin	ANEGAIYPDN[115]TTDFQR
41	IPI00557598	Igh-1a 39 kDa protein	EEQYN[115]STFR
42	IPI00191437	Putative uncharacterized protein ENSRNOP00000016685	VILILDPAISGN[115]ETEPYPAFTR
43	IPI00195931	Tspan8 Tetraspanin 8	ILN[115]ETLYENAK
44	IPI00363901	- 18 kDa protein	EN[115]ISDPTSPVR
45	IPI00515829	Kng1 Kininogen 1	IIYSIVQTN[115]CSK
46	IPI00211616	Slc3a2 4F2 cell-surface antigen heavy chain	YLN[115]ATGSR
47	IPI00204808	Mep1b Meprin A subunit beta	VGVEAFFPN[115]GTQFSR
48	IPI00365985	Hsp90b1 Isoform 1 of Endoplasmin	EEEAIQLDGLN[115]ASQIR
49	IPI00197684	Xpnpep2 X-prolylaminopeptidase (Aminopeptidase P) 2	LPVTAVN[115]TTM[147]R
50	IPI00231789	MmeNeprilysin	EIAN[115]ATTKPEDR
51	IPI00208721	Unc84b Putative uncharacterized protein Unc84b	ALSPN[115]STISSAPK
52	IPI00370427	TinagTubulointerstitial nephritis antigen	ISSN[115]ETEIM[147]R
53	IPI00213036	C4b Complement C4	FSDGLESN[115]R
54	IPI00364124	Lrpap1 Alpha-2-macroglobulin receptor-associated protein	VIDLWDLAQSAN[115]FTEK
55	IPI00360085	Pign phosphatidylinositol glycan	ENPVEFDSLFN[115]ESK
56	IPI00421319	Tmem106b LRRGT00101	LSN[115]ITNIGPLDM[147]K
57	IPI00188956	Thy1 Thy-1 membrane glycoprotein	VLTLAN[115]FTTK
58	IPI00326140	Pzp Alpha-1-macroglobulin	N[115]LTVQVNSVR
59	IPI00339118	Enpp1 Isoform 2 of Ectonucleotidepyrophosphatase\phosphodiesterase family member 1	VYN[115]GSVPFEER
60	IPI00191090	BgnBiglycan	M[147]IEN[115]GSLSFLPTLR
61	IPI00870888	Itgav integrin	AN[115]TTQPGIIEGGQVLK
62	IPI00231601	Ptprc Isoform 4 of Receptor-type tyrosine-protein phosphatase C	FGN[115]VTVR
63	IPI00191737	Alb Serum albumin	LGEYGFQN[115]AVLVR
64	IPI00471666	Fam151a Protein FAM151A	QLALN[115]TTR
65	IPI00400579	GaaLysosomal alpha-glucosidase	GVFITN[115]ETGQPLIGK
66	IPI00422049	RT1-Da RT1 class II	FSPPAVN[115]VTWLR
67	IPI00200067	F11r Junctional adhesion molecule A	AFIN[115]SSYTIDPK
68	IPI00210091	Serpina3m serine (or cysteine) proteinase inhibitor	YTGN[115]SSALFILPDK
69	IPI00364862	RGD1308958 Putative uncharacterized protein RGD1308958	VNN[115]TAVIEK
70	IPI00192495	Ncstn Isoform 1 of Nicastrin	AN[115]NSWFQSILR
71	IPI00210824	Serpina6 Corticosteroid-binding globulin	DLLTN[115]QSDFSGNTK
72	IPI00207068	Glg1 Golgi apparatus protein 1	LN[115]LTTDPK
73	IPI00207180	Slc6a18 Sodium-dependent neutral amino acidtransporter B(0)AT3	DEYPSVLM[147]YLN[115]ATQPER
74	IPI00197817	Atp6ap1 V-type proton ATPase subunit S1	LN[115]ASLPALLLIR
75	IPI00370450	Plxnb2 Putative uncharacterized protein Plxnb2	AM[147]SN[115]ISVR
76	IPI00210360	Hspg2 394 kDa protein	ALVN[115]FTR
77	IPI00194733	Atrn Isoform 1 of Attractin	IDSTGN[115]VTNELR
78	IPI00205166	Itga6 integrin	LWN[115]STFLEEYSK
79	IPI00209300	Ptprj Vascular protein tyrosine phosphatase 1	VTN[115]VSLR