

Figure S1. GO and KEGG pathways, protein domains and cluster analysis of crotonylated proteins in immunoglobulin A nephropathy. GO analysis of crotonylated proteins in (A) cellular component.

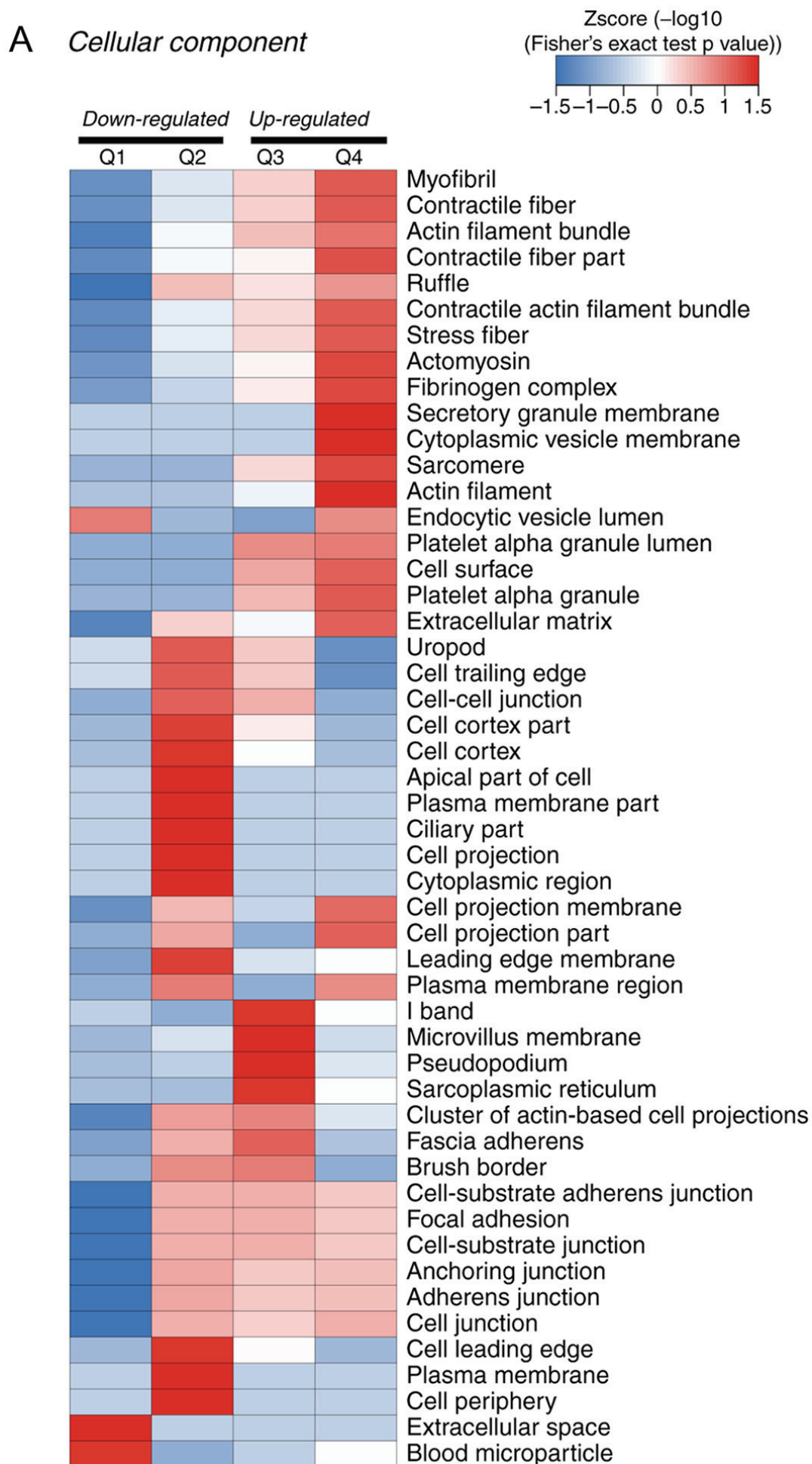


Figure S1. Continued. GO analysis of crotonylated proteins in (B) biological process.

**B** *Biological process*

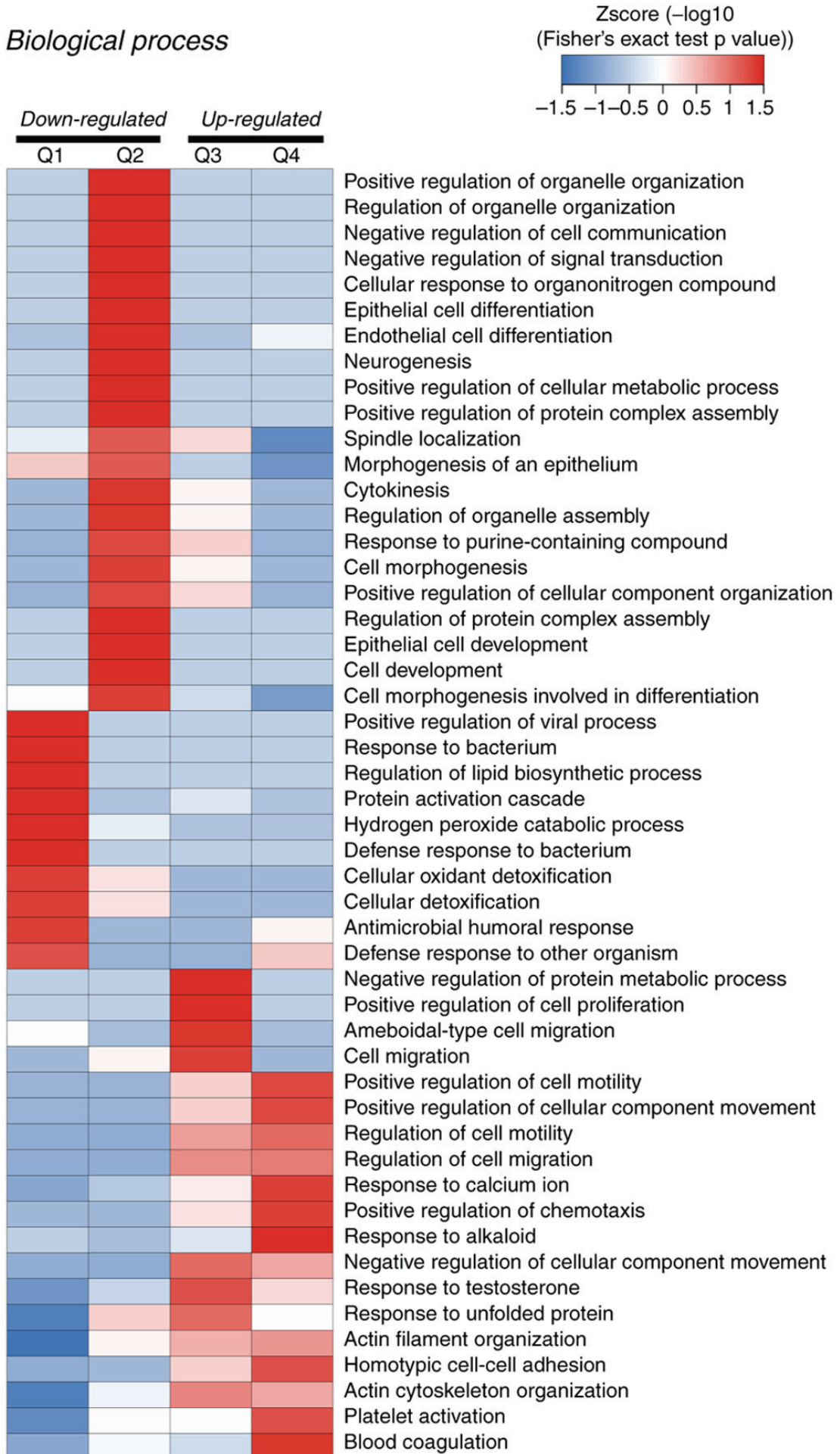


Figure S1. Continued. GO analysis of crotonylated proteins in (C) molecular function categories.

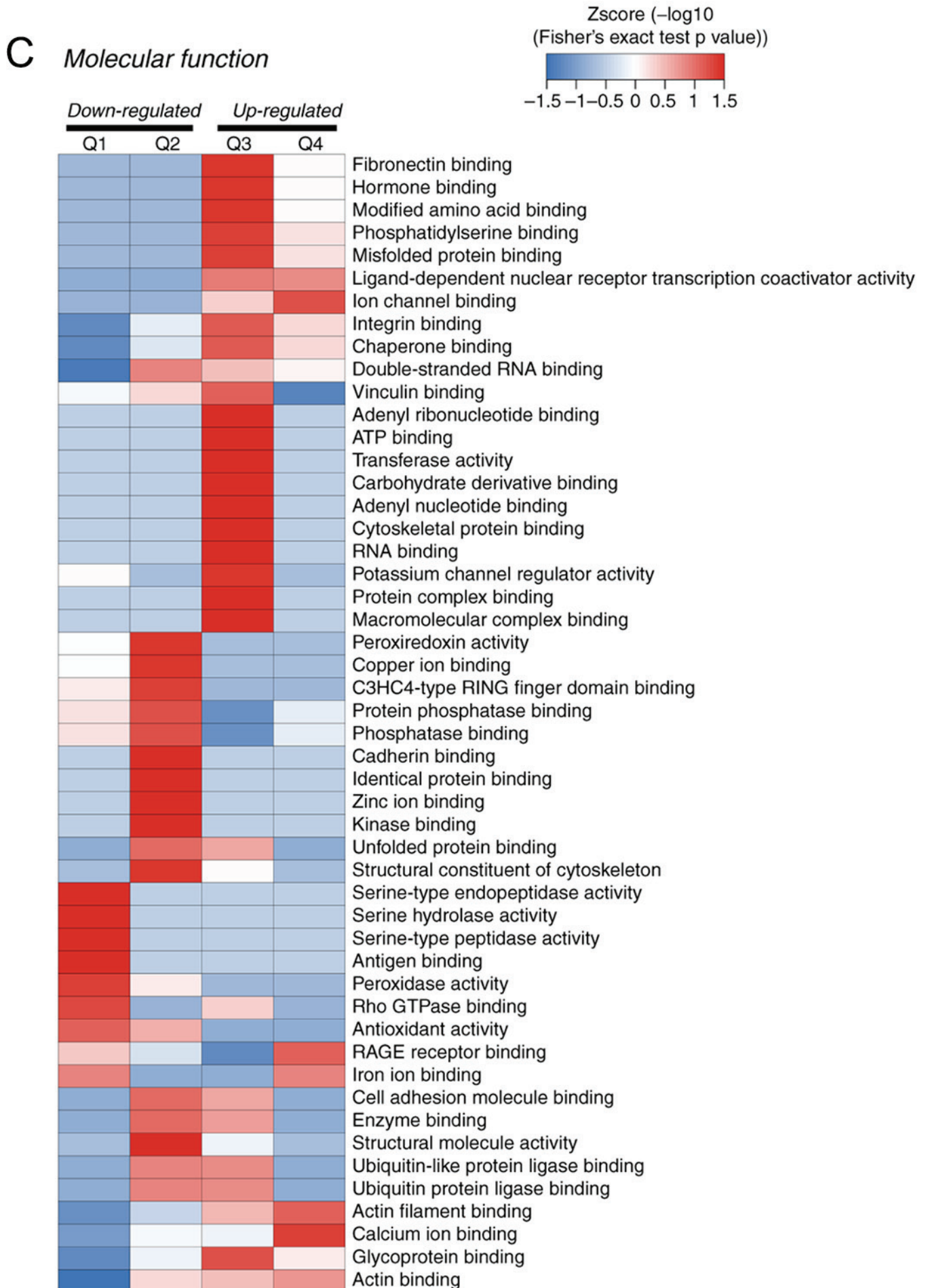


Figure S1. Continued. (D) KEGG analysis of crotonylated proteins.

**D** KEGG pathway

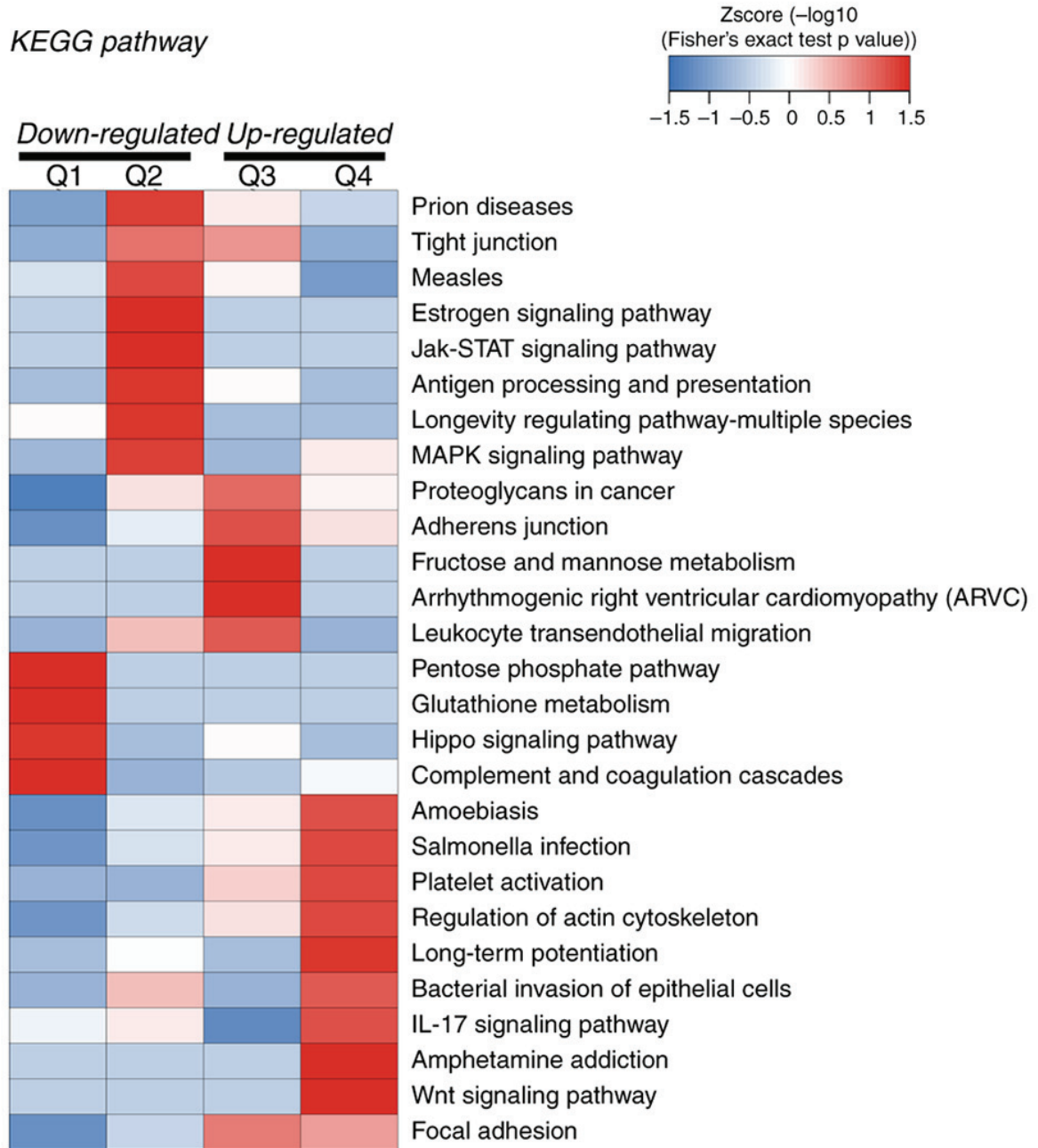


Figure S1. Continued. (E) Protein domain analysis of crotonylated proteins. A corrected  $P < 0.05$  was considered to indicate a significant difference. GO, Gene Ontology; KEGG, Kyoto Encyclopedia of Genes and Genomes.

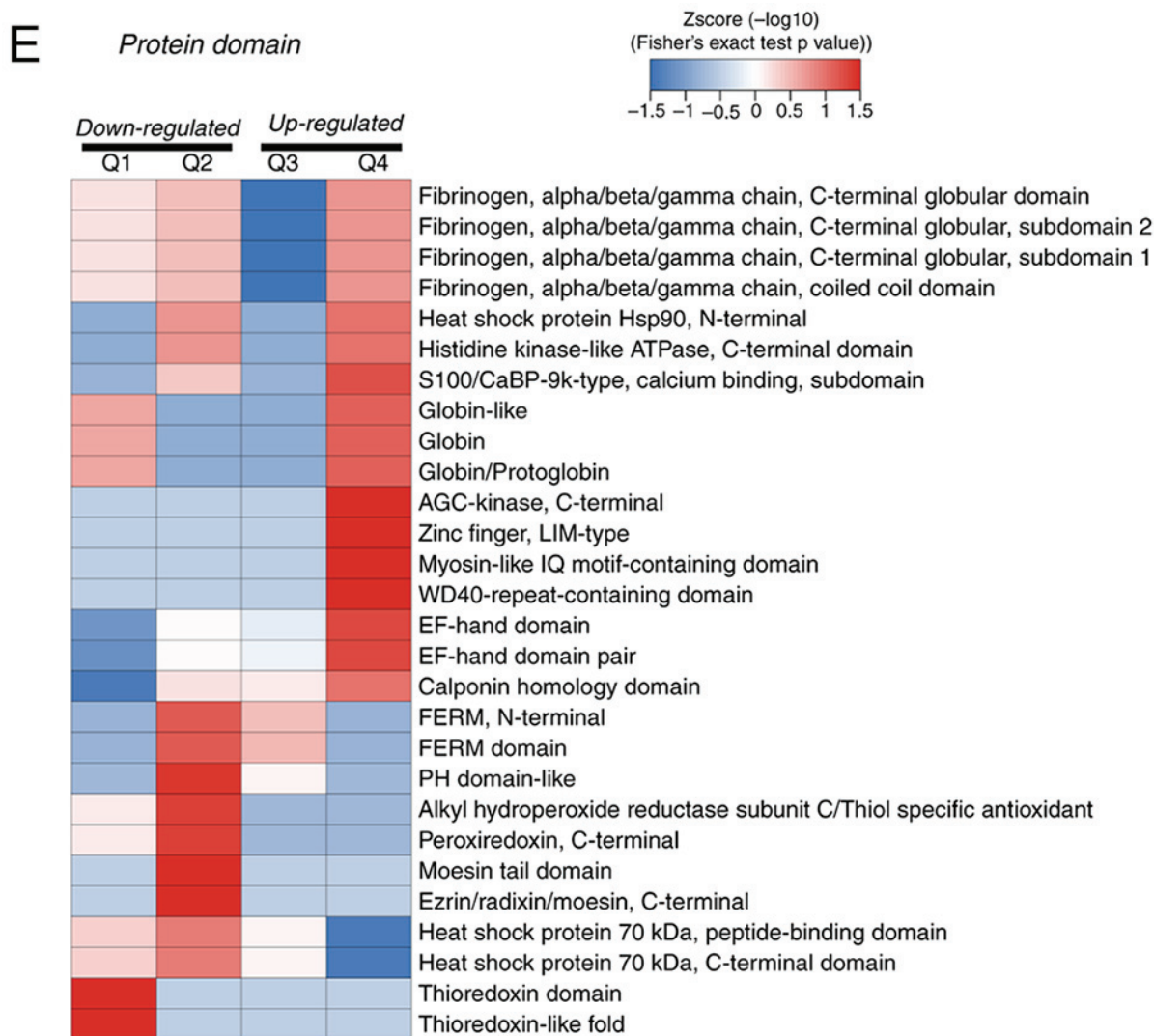


Table SI. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
LVGGK(1)DFEQPLAISR	PDLIM1	4.311317143	Up	Q4
SQLDINNK(1)K	DNM1L	1.262721385	Up	Q3
SVAK(1)LQDER	PSMA7	0.588993584	Down	Q1
EK(1)EENEK	PSMA7	1.400454743	Up	Q4
VTTSITSK(1)K	FYB	0.444088034	Down	Q1
LDVPK(1)QSSQR	ARPC1B	1.603570432	Up	Q4
WTK(1)VHELK	ARPC1B	1.315239535	Up	Q4
ARPDAAEK(1)K	ARPC2	1.82556619	Up	Q4
VFMQEFK(1)EGR	ARPC2	0.754072705	Down	Q1
DDETMVYESK(1)K	ARPC2	0.777036538	Down	Q2
ANVFFK(1)NYEIK	ARPC3	2.226826574	Up	Q4
SQAVK(1)DR	ARPC5	1.330852389	Up	Q4
WEK(1)VQQLVPK	ACTN4	0.715649192	Down	Q1
EAMLK(1)HR	ACTN4	1.274870048	Up	Q3
HRPELIEYDK(1)LR	ACTN4	1.949406668	Up	Q4
VHK(1)INNVNK	ACTN4	1.277700108	Up	Q3
ALDFIASK(1)GVK	ACTN4	0.544351459	Down	Q1
NLDQMK(1)K	DIAPH1	0.561255312	Down	Q1
LHDEK(1)EETAGSYDSR	DIAPH1	1.870512977	Up	Q4
DVQNFPAAATDEK(0.75)DK(0.25)FVEK	DIAPH1	0.442160268	Down	Q1
YAPSGFYIASGDVSGK(1)LR	WDR1	2.511772356	Up	Q4
FK(1)FTIGDHSR	WDR1	1.332631919	Up	Q4
DEGK(1)LLEAK	WDR1	1.483339243	Up	Q4
LYSILGTTLK(1)DEGK	WDR1	0.647862409	Down	Q1
VIQQSLEQEEAEHK(1)ATK	ROCK2	1.262660033	Up	Q3
HK(1)QELTEK	ROCK2	0.640004996	Down	Q1
HK(0.023)QELTEK(0.977)DATIASLEETNR	ROCK2	1.489627264	Up	Q4
KADHEADK(1)K	ROCK2	0.750297288	Down	Q1
EK(1)VMYEK	TBCA	1.5567326	Up	Q4
DVSDEK(1)LR	CS	0.795317221	Down	Q2
DK(1)ITQYEK	EIF3J	0.434996967	Down	Q1
VEEFK(1)LK	IDH1	0.62632901	Down	Q1
AEAEQMAK(1)K	FLOT1	0.698800715	Down	Q1
EK(1)ELEAR	FLOT1	0.664777502	Down	Q1
VVEK(1)EAETER	ERLIN2	0.591064405	Down	Q1
SIVEK(1)IQAK	RTN3	0.626793931	Down	Q1
ANHPMDAETVK(1)AK	AP2A1	1.50872093	Up	Q4
MVCANK(1)EEK	GSR	1.240864637	Up	Q3
TLVVHEK(1)ADDLGK	SOD1	0.595042312	Down	Q1
HGGPK(1)DEER	SOD1	0.805661092	Down	Q2
ADDLGK(1)GGNEESTK	SOD1	0.344150386	Down	Q1
QIGGDGMMDITDTYK(1)FQEGQEEER	F13A1	2.829307649	Up	Q4
KPLNTEGVMK(1)SR	F13A1	0.526167198	Down	Q1
ETFVDVTLPLSFK(1)K	F13A1	0.723814515	Down	Q1
DVLAK(1)QK	F13A1	0.619428953	Down	Q1
LALETALMYGAK(1)K	F13A1	1.295497262	Up	Q3
FHVEEGK(1)GK	PGK1	0.549453012	Down	Q1
ITLPVDFVTADK(1)FDENAK	PGK1	0.452844346	Down	Q1
IVK(1)DLMSK	PGK1	0.519819209	Down	Q1
AGGFLMK(1)K	PGK1	1.340581138	Up	Q4
VK(1)AEPK	PGK1	0.770426939	Down	Q2
ILGGHLDK(1)GSFPWQAK	HP	0.7512933	Down	Q1
QWINK(1)AVGDK	HP	1.370500954	Up	Q4
TEGDGVYTLNDK(1)K	HP	0.622230534	Down	Q1
HYEGSTVPEK(1)K	HP	0.490232331	Down	Q1
QK(1)VSVNER	HP	0.533630292	Down	Q1
SVLK(1)GGPFSDSYR	CA1	0.537348753	Down	Q1
DFPIAK(1)GER	CA2	0.792013917	Down	Q2

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
GK(1)SADFTNFDPR	CA2	0.729146912	Down	Q1
FLEDVK(1)K	SERPINA1	1.587807256	Up	Q4
AVHK(1)AVLTIDEK	SERPINA1	0.762240676	Down	Q1
GK(1)WERPFEVK	SERPINA1	1.660453165	Up	Q4
GTQGK(1)IVDLVK	SERPINA1	2.038841003	Up	Q4
SLNEEAVK(1)K	A2M	0.473348427	Down	Q1
AHEAK(1)IR	C3	0.588109313	Down	Q1
SDDK(1)VTLEER	C3	0.652043637	Down	Q1
EAK(1)VQWK	IGKC	0.312247905	Down	Q1
ADYEK(1)HK	IGKC	0.378142909	Down	Q1
VQWK(1)VDNALQSGNSQESVTEQDSK	IGKC	0.333799837	Down	Q1
PK(1)DTLMISR	IGHG1	0.647264501	Down	Q1
ALPAPIEK(1)TISK	IGHG1	0.586739176	Down	Q1
VEPK(1)SCDK	IGHG1	0.693619397	Down	Q1
GLPAPIEK(1)TISK	IGHG2	0.600908477	Down	Q1
GFSPK(1)DVLVR	IGHA2	0.514324619	Down	Q1
VAAEDWK(1)K	IGHA2	0.565355568	Down	Q1
FFESFGDLSSPDVAVMGNPK(1)VK	HBD	1.437429268	Up	Q4
TAVNALWGK(1)VNVDVAVGGEALGR	HBD	0.276299412	Down	Q1
GTFSQLSELHCDK(1)LHVDPENFR	HBD	0.732679932	Down	Q1
NFGK(1)EFTPQMQAAYQK	HBD	0.678729466	Down	Q1
EQELQK(1)EEAR	SPTA1	0.739999013	Down	Q1
LTHK(1)EFR	SPTA1	0.52285358	Down	Q1
DLASAGNLLK(1)K	SPTA1	0.410867169	Down	Q1
QEMSK(1)DLEEVK	APOA1	0.633502154	Down	Q1
K(1)WQEEMELYSR	APOA1	0.53383562	Down	Q1
AK(1)VQPYLDDFQK	APOA1	0.418443446	Down	Q1
QK(1)VEPLR	APOA1	0.433440635	Down	Q1
QK(1)LHELQEK	APOA1	0.313458353	Down	Q1
VK(1)SPELQAEAK	APOA2	1.973500912	Up	Q4
DLMEK(1)VK	APOA2	1.336361193	Up	Q4
TVIGPDGHK(1)EVTK	FGA	0.720048077	Down	Q1
LVTSK(1)GDK	FGA	0.544135864	Down	Q1
QLEQVIK(1)DLLPSR	FGA	0.535540409	Down	Q1
MK(1)GLIDEVNVQDFTR	FGA	0.496438746	Down	Q1
AQLVDMK(1)R	FGA	0.567148321	Down	Q1
SQLQK(1)VPPEWK	FGA	1.204080323	Up	Q3
EK(1)VTSGSTTTTR	FGA	0.234121591	Down	Q1
EYHTEK(1)LVTSK	FGA	0.800679167	Down	Q2
LK(1)NSLFEYQK	FGA	0.339582968	Down	Q1
VQHIQLLQK(1)NVR	FGA	1.837028736	Up	Q4
EVDLK(1)DYEDQK	FGA	0.482106685	Down	Q1
QVK(1)DNENVVNEYSSSELEK	FGB	0.705221861	Down	Q1
AAATQK(1)K	FGB	0.40706936	Down	Q1
TPCTVSCNIPVVSQK(1)ECEIIR	FGB	1.988544474	Up	Q4
GHRPLDK(1)K	FGB	0.60163817	Down	Q1
TSEVK(1)QLIK	FGG	0.418726245	Down	Q1
DCQDIANK(1)GAK	FGG	0.417383852	Down	Q1
YLQEIYNSNNQK(1)IVNLK	FGG	0.659955845	Down	Q1
K(1)MLEEIMK	FGG	0.305111022	Down	Q1
EK(1)VAQLEAQCQEPCK	FGG	1.809364142	Up	Q4
RLDGSVDFK(1)K	FGG	0.51967062	Down	Q1
VAQLEAQCQEPCK(1)DTVQIHDITGK	FGG	15.06672651	Up	Q4
TSTADYAMFK(1)VGPEADK	FGG	0.693870336	Down	Q1
IVNLK(1)EK	FGG	0.402785537	Down	Q1
K(1)NWIQYK	FGG	0.788297358	Down	Q2
GTHCNQVEVIATLK(1)DGR	PPBP	2.846224666	Up	Q4
K(1)LAGDESAD	PPBP	3.591758182	Up	Q4

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
GK(1)EESLSDSLYAELR	PPBP	5.114949768	Up	Q4
DK(1)EACVHK	TF	0.580298109	Down	Q1
FQLFGSPSGQK(1)DLLFK	LTF	1.799950001	Up	Q4
YLG PQYVAGITNLK(1)K	LTF	0.415958143	Down	Q1
FFSASCVPGADK(1)GQFPNLCR	LTF	0.69620251	Down	Q1
THYYAVAVVK(1)K	LTF	0.435313736	Down	Q1
FK(1)DCHLAR	LTF	0.479000117	Down	Q1
FHYK(1)TDQGIK	CAT	0.428094627	Down	Q1
VWPHK(1)DYPLIPVGK	CAT	0.444265611	Down	Q1
AK(1)VFEHIGK	CAT	0.564810338	Down	Q1
DAQIFIQK(1)K	CAT	0.510918551	Down	Q1
DPASDQM QHWK(1)EQR	CAT	0.649337377	Down	Q1
VFEHIGK(1)K	CAT	0.474620055	Down	Q1
AAQEEYVK(1)R	ALDOA	1.207591846	Up	Q3
SK(1)GGVVGIK	ALDOA	0.341735931	Down	Q1
K(1)ELSDIAHR	ALDOA	1.263874043	Up	Q3
DLAK(1)DITSDTSGDFR	ANXA1	0.474923505	Down	Q1
NALLSLAK(1)GDR	ANXA1	0.498114231	Down	Q1
GVDEATIIDILTK(1)R	ANXA1	0.624117564	Down	Q1
HDMNK(1)VLDLELK	ANXA1	0.539171622	Down	Q1
SQAIATK(1)K	POB	0.610798284	Down	Q1
VVDLMAHMASK(1)E	GAPDH	1.209645618	Up	Q3
LEK(0.007)PAK(0.993)YDDIK	GAPDH	1.299166517	Up	Q3
AGAHLQGGAK(1)R	GAPDH	1.499106912	Up	Q4
AFK(1)SLDK	CAPNS1	1.213715984	Up	Q3
WQAIYK(1)QFDTR	CAPNS1	1.281069991	Up	Q3
TK(1)DGVVEITGK	HSPB1	1.726641928	Up	Q4
VVTHPFK(1)TIELQMK	CYBB	0.54381325	Down	Q1
GCPQEK(1)EK	ITGB3	1.25926619	Up	Q3
EFAK(1)FEEER	ITGB3	2.315001367	Up	Q4
EK(1)SFTIKPVGFK	ITGB3	4.196124222	Up	Q4
ELK(1)DTGK	ITGB3	1.609483177	Up	Q4
CPTCPDCTFK(1)K	ITGB3	8.354947197	Up	Q4
SK(1)VELEVR	ITGB3	0.690413248	Down	Q1
MGVAHK(1)K	S100A8	1.477704362	Up	Q4
SHEESHK(1)E	S100A8	3.236673144	Up	Q4
K(1)SHEESHKE	S100A8	7.175999636	Up	Q4
K(1)LLETCPQYIR	S100A8	0.701237345	Down	Q1
K(1)GADVWFK	S100A8	0.747518187	Down	Q1
YSLIK(1)GNFHAVYR	S100A8	0.369723591	Down	Q1
GLMATPAK(1)LNR	MPO	0.719195414	Down	Q1
FQLK(0.999)ESDK(0.001)DR	PRKCB	1.805960492	Up	Q4
LGHPTLNQGEFK(1)ELVR	S100A9	0.255568732	Down	Q1
LTWASHEK(0.999)MHEGDEGPGHHHK (0.001)PGLGEGTP	S100A9	1.788306973	Up	Q4
NEK(1)VIEHIMEDLDTNADK	S100A9	0.769811268	Down	Q2
K(1)DLQNFLK	S100A9	2.697254572	Up	Q4
KENK(1)NEK	S100A9	2.249769335	Up	Q4
EGDKHTLSK(1)K	S100A6	0.817904997	Down	Q2
ELTIGSK(1)LQDAEIAR	S100A6	0.804361573	Down	Q2
TIAPALVSK(1)K	ENO1	0.616614796	Down	Q1
AGAVEK(1)GVPLYR	ENO1	0.82643485	Down	Q2
DATNVGDEGGFAPNILENK(1)EGLELLK	ENO1	0.546630295	Down	Q1
EGLELLK(1)TAIGK	ENO1	1.570654515	Up	Q4
GVS(1)AVEHINK	ENO1	0.509239617	Down	Q1
IDK(1)LMIEMDGTENK	ENO1	0.567842352	Down	Q1
K(1)LNVTEQEK	ENO1	0.723155516	Down	Q1
YMGK(1)GVSK	ENO1	0.607337377	Down	Q1

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
LMIEMDGTENK(1)SK	ENO1	0.489939123	Down	Q1
AVNEK(1)SCNCLLLK	ENO1	0.749854191	Down	Q1
IVALFPK(1)DVDR	PYGL	0.588792763	Down	Q1
IDDVAALDK(1)K	PYGL	0.804360968	Down	Q2
VLYPNDNFFEGK(1)ELR	PYGL	0.62125953	Down	Q1
DVMPEVNK(1)VLDK	GPI	0.669691791	Down	Q1
EWFLQAAK(1)DPSAVAK	GPI	0.609625936	Down	Q1
MLVDLAK(1)SR	GPI	0.807204411	Down	Q2
ELQAAGK(1)SPEDLER	GPI	1.374073131	Up	Q4
ALK(1)DEEK	TPM3	2.0897343	Up	Q4
EDK(1)YEEIHK	TPM3	3.966031746	Up	Q4
ILTDK(1)LK	TPM3	2.704022989	Up	Q4
YSQK(0.986)EDK(0.014)YEEIHK	TPM3	2.943768997	Up	Q4
MELQEIQLK(1)EAK	TPM3	2.411743516	Up	Q4
EAK(1)HIAEEADR	TPM3	1.451420455	Up	Q4
LSNFK(1)TAAESFK	P4HB	0.622581154	Down	Q1
NFEDVAFDEK(1)K	P4HB	0.758800024	Down	Q1
TAAESFK(1)GK	P4HB	1.324872411	Up	Q4
LK(1)AEGSEIR	P4HB	0.752550556	Down	Q1
EMYK(1)TDLEK	ANXA2	1.843047521	Up	Q4
MSMK(1)EVDEQMLNVQNK	TUBB	0.757825371	Down	Q1
TDK(1)TLVLLMGK	PFN1	0.50322546	Down	Q1
STGGAPTFNVTVT(1)TDK	PFN1	0.742136771	Down	Q1
TFVNITPAEVGVLV(1)DR	PFN1	0.525392282	Down	Q1
EGVHGGLINK(1)K	PFN1	0.520504732	Down	Q1
ELHINLIPNK(1)QDR	HSP90AA1	3.918013445	Up	Q4
QK(1)AEADK	HSP90AA1	1.434534921	Up	Q4
EMLQQSK(1)ILK	HSP90AA1	0.798443264	Down	Q2
VILHLK(1)EDQTEYLEER	HSP90AA1	1.746504374	Up	Q4
HIYYITGETK(1)DQVANSFAVER	HSP90AA1	2.079514644	Up	Q4
AEADK(1)NDK	HSP90AA1	2.145225359	Up	Q4
LHDALDAK(1)SK	FH	0.731712049	Down	Q1
LSHRPK(1)TGFIR	THBS1	1.200165322	Up	Q3
TNYIGHK(1)TK	THBS1	1.49065653	Up	Q4
GAGTDEK(1)TLTR	ANXA6	0.699572284	Down	Q1
NDTSGEYK(1)K	ANXA6	0.522294945	Down	Q1
LDSGK(1)ELK	HSP90AB1	0.63845924	Down	Q1
AEADK(1)NDK	HSP90AB1	1.787675456	Up	Q4
MEESK(1)AK	HSP90AB1	1.980770455	Up	Q4
NVGSQTLQTFK(1)AR	ITGA2B	0.524466159	Down	Q1
TEEAEK(1)TPVGCFLAQPEGR	ITGA2B	3.308787736	Up	Q4
K(1)SDNSPK	PLEK	0.228185473	Down	Q1
ITTTK(1)QQDHFFQAAFLEER	PLEK	0.593626286	Down	Q1
GSTLTSPCQDFGK(1)R	PLEK	0.610199331	Down	Q1
K(1)GSVFNTWK	PLEK	0.402789133	Down	Q1
AIK(1)CIEGGQK	PLEK	0.513352365	Down	Q1
EGYLVK(1)K	PLEK	0.80475335	Down	Q2
TQHIGNQEENK(1)SK	PTPRC	1.793991899	Up	Q4
QVDQLTNDK(1)AR	VIM	0.826711601	Down	Q2
GDTSGDYK(1)K	ANXA5	0.785565719	Down	Q2
GAGTNEK(1)VLTEIIASR	ANXA5	1.422394245	Up	Q4
EAK(1)HIAEDADR	TPM1	4.653068496	Up	Q4
AQK(1)DEEK	TPM1	3.478531447	Up	Q4
SESPK(1)EPEQLR	HNRNPA1	0.799107821	Down	Q2
TLVWSEK(1)EQVEK	LTA4H	0.437409911	Down	Q1
SLVLDTK(1)DLTIEK	LTA4H	0.625065529	Down	Q1
LSK(1)EEIER	HSPA1B	0.512359388	Down	Q1
LDK(1)AQIHDLVLVGGSTR	HSPA1B	0.828705531	Down	Q2

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
VQVSYK(1)GETK	HSPA1B	0.729106866	Down	Q1
YK(1)AEDEVQR	HSPA1B	0.474947066	Down	Q1
ANK(1)ITITNDK	HSPA1B	0.678657074	Down	Q1
ITITNDK(1)GR	HSPA1B	0.448008589	Down	Q1
QIESK(1)TAFQEALDAAGDK	TXN	0.643297203	Down	Q1
VK(1)QIESK	TXN	0.588903041	Down	Q1
VGEFSGANK(1)EK	TXN	0.623527239	Down	Q1
VTK(1)DGVTVAK	HSPD1	1.358206649	Up	Q4
VGGTSDVEVNEK(1)K	HSPD1	1.2511372	Up	Q3
FAEDK(1)K	HSPA5	0.802948208	Down	Q2
FLPFK(1)VVEK	HSPA5	0.431768221	Down	Q1
NK(1)ITITNDQNR	HSPA5	0.751106053	Down	Q1
NQIGDK(1)EK	HSPA5	0.781735107	Down	Q2
ETAAYLGK(1)K	HSPA5	0.737540782	Down	Q1
MK(1)ETAAYLGK	HSPA5	1.23542489	Up	Q3
VLESDLK(1)K	HSPA5	1.64801444	Up	Q4
LDK(1)SQIHDIIVLVGGSTR	HSPA8	2.166611376	Up	Q4
PK(1)VQVEYK	HSPA8	0.629647614	Down	Q1
YK(1)AEDEK	HSPA8	0.494548564	Down	Q1
DISENK(1)R	HSPA8	0.556700688	Down	Q1
MK(1)EIAEAYLGK	HSPA8	0.815429076	Down	Q2
MVNHFAEFK(1)R	HSPA8	0.477577192	Down	Q1
QATK(1)DAGTIAGLNVLR	HSPA8	1.735416987	Up	Q4
LSK(1)EDIER	HSPA8	0.400601797	Down	Q1
VQVEYK(1)GETK	HSPA8	0.544049035	Down	Q1
AEDEK(1)QR	HSPA8	1.246198222	Up	Q3
AMTK(1)DNLLGK	HSPA8	0.413182005	Down	Q1
ITITNDK(1)GR	HSPA8	0.784056936	Down	Q2
IINEPTAAAIAYGLDK(1)K	HSPA8	0.791044382	Down	Q2
LWGTQDVSQDIQEMK(1)DESAR	SLC2A3	2.360884024	Up	Q4
KEENAK(1)QILQR	SLC2A3	2.527306803	Up	Q4
EK(1)VQLIEDR	SPTB	0.400742691	Down	Q1
QSEPFK(1)ATPEEK	G6PD	0.714038539	Down	Q1
GPTEADELMK(1)R	G6PD	0.674011264	Down	Q1
GFSNLK(1)K	MTHFD1	0.726653542	Down	Q1
LAADVKG(1)SGTER	SLC25A6	1.699213969	Up	Q4
DEGGK(1)AFFK	SLC25A6	0.713544725	Down	Q1
ELK(1)DDLK	ANXA3	0.4563023	Down	Q1
RDESLK(1)VDEHLAK	ANXA3	0.539773816	Down	Q1
LDHLAEK(1)FR	ACTN1	0.639480418	Down	Q1
K(1)DDPLTNLNTAFDVAEK	ACTN1	0.795576749	Down	Q2
DAK(1)GISQEQMNEFR	ACTN1	1.652515891	Up	Q4
K(1)HEAFESDLAAHQDR	ACTN1	1.519482728	Up	Q4
ATLPDADK(1)ER	ACTN1	1.223267833	Up	Q3
ILAGDK(1)NYITMDELR	ACTN1	1.236462456	Up	Q3
ISNVNK(1)ALDFIASK	ACTN1	0.476334003	Down	Q1
ALDFIASK(1)GVK	ACTN1	0.677230089	Down	Q1
TLFPLIEAK(1)K	XRCC5	0.385219821	Down	Q1
VFDAIMNFK(1)K	EEF2	0.691046573	Down	Q1
SATSPEGK(1)K	EEF2	0.722005194	Down	Q1
EFVTAFAK(1)K	PDIA4	1.776584564	Up	Q4
K(1)WEAAHAAEQQR	HLA-A	2.949260872	Up	Q4
IGNFSTDIK(1)DSK	LCP1	1.531080138	Up	Q4
SSSISFK(1)DPK	LCP1	1.288127806	Up	Q3
STDVAK(1)TFR	LCP1	0.588580879	Down	Q1
TENLNDDEK(1)LNNAK	LCP1	0.78949247	Down	Q2
IFHGLK(1)STDVAK	LCP1	1.350553333	Up	Q4
TVK(0.999)EEAEK(0.001)PER	PRKCSH	1.999539734	Up	Q4

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
NK(1)FEEAER	PRKCSH	2.269981239	Up	Q4
VNFAMNVGK(1)AR	PKM	1.839714715	Up	Q4
VLGEK(1)GK	PKM	0.4728449	Down	Q1
SVETLK(1)EMIK	PKM	0.356067477	Down	Q1
GSGTAEVELK(1)K	PKM	0.750598004	Down	Q1
IEK(1)AVVSQR	HSP90B1	1.604517023	Up	Q4
NK(1)EIFLR	HSP90B1	0.764129489	Down	Q1
FQNVAK(1)EGVK	HSP90B1	0.808950856	Down	Q2
GLFDEYGSK(1)K	HSP90B1	1.235573538	Up	Q3
EK(1)EELMLR	EZR	0.785195952	Down	Q2
FVEDTK(1)K	CBR1	1.32644575	Up	Q4
ALAAGGYDVEK(1)NNSR	HIST1H1B	0.610877455	Down	Q1
PSEK(1)IQVLK	CD36	1.965444392	Up	Q4
DDMIPK(1)ESK	BPI	0.556418157	Down	Q1
VNEK(1)LQK	BPI	0.463542097	Down	Q1
NLPGMTK(1)MAK	VCL	0.510326848	Down	Q1
EVENSEDPK(1)FR	VCL	1.247029374	Up	Q3
K(1)IDAAQNWLADPNGGPEGEEQIR	VCL	1.890214875	Up	Q4
DTEAMK(1)R	VCL	0.807871422	Down	Q2
LNQAK(1)GWLR	VCL	0.767056278	Down	Q1
ILGAVAK(1)VR	VCL	0.740397181	Down	Q1
NSK(1)NQGIEEALK	VCL	0.712363067	Down	Q1
ALIQCAK(1)DIAK	VCL	0.768159745	Down	Q1
LAK(1)EVAK	VCL	1.43065715	Up	Q4
PAK(1)AAVHLEGK	VCL	0.74687117	Down	Q1
NQGIEEALK(1)NR	VCL	1.320459318	Up	Q4
AAAVGTANK(1)STVEGIQASVK	VCL	1.207961502	Up	Q3
VGELCAGK(1)ER	VCL	0.624523573	Down	Q1
ALASQLQDSLK(1)DLK	VCL	0.67113023	Down	Q1
EAVK(1)AASDELSK	VCL	0.775255261	Down	Q2
QDLLAK(1)CDR	VCL	0.831381958	Down	Q2
IFVTTK(1)NSK	VCL	0.785437166	Down	Q2
AAVHLEGK(1)IEQAQR	VCL	1.545903058	Up	Q4
ILLVAK(1)R	VCL	0.632866191	Down	Q1
AETAAK(1)HGEAQVK	PGAM1	0.25661986	Down	Q1
HYGGLTGLNK(1)AETAAK	PGAM1	0.560335785	Down	Q1
EAPIDK(1)K	MYL12A	1.385142875	Up	Q4
LVSK(1)DGK	NCL	0.708712002	Down	Q1
TFEEK(1)QGTEIDGR	NCL	0.800200007	Down	Q2
MAK(1)EGLLFEGR	HK1	1.21806844	Up	Q3
DK(1)HLAVAYFQR	NCF2	0.361815861	Down	Q1
VSGLGEK(1)VDVGK	FLNA	1.531755008	Up	Q4
LDVQFSGGTK(1)GDAVR	FLNA	0.667495591	Down	Q1
VTVK(1)GPK	FLNA	0.688629333	Down	Q1
VK(1)CSGPGLSPGMVR	FLNA	0.730984288	Down	Q1
VK(1)AEGPGLSR	FLNA	0.784699368	Down	Q2
ETGEHLVHVK(1)K	FLNA	0.542344296	Down	Q1
GK(1)LDVQFSGGTK	FLNA	0.600004747	Down	Q1
GQHVPGPSFQFTVGPLGEGGAHK(1)VR	FLNA	2.976596253	Up	Q4
VDVGKDQEFTVK(1)SK	FLNA	0.722504165	Down	Q1
ETADFK(1)VYTK	FLNA	0.824659893	Down	Q2
VK(1)CSGPGLER	FLNA	0.536645679	Down	Q1
VGTECGNQK(1)VR	FLNA	0.262487222	Down	Q1
IECDDK(1)GDGSCDVR	FLNA	0.185542157	Down	Q1
VK(1)VYGPVAK	FLNA	1.539857942	Up	Q4
ALTQTGGPHVK(1)AR	FLNA	1.265944	Up	Q3
VK(1)VEPSHDASK	FLNA	1.378356209	Up	Q4
VYTK(1)GAGSGELK	FLNA	0.34015752	Down	Q1

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
FADQHVPSPFSVK(1)VTGEGR	FLNA	1.818056268	Up	Q4
VVAK(1)GLGLSK	FLNA	0.581294824	Down	Q1
AK(1)VTGPR	FLNA	0.661651592	Down	Q1
HGGK(1)APLR	FLNA	1.843441637	Up	Q4
VAQPTITDNK(1)DGTVTVR	FLNA	1.791662733	Up	Q4
AHVVPDASK(1)VK	FLNA	1.240251198	Up	Q3
VPVHDVTDASK(1)VK	FLNA	1.260767693	Up	Q3
VEPSHDASK(1)VK	FLNA	1.846638511	Up	Q4
VK(1)ETADFK	FLNA	0.641750582	Down	Q1
VK(1)MDCQCEPEGYR	FLNA	1.450903866	Up	Q4
VYGPVAK(1)TGLK	FLNA	1.290616902	Up	Q3
GLQPK(1)GVR	FLNA	0.177647048	Down	Q1
DTYNK(1)LK	CD9	0.830078759	Down	Q2
TK(1)DEPQR	CD9	0.451930818	Down	Q1
EVQEFYK(1)DTYNK	CD9	2.069811041	Up	Q4
KLEEEGEQFVK(1)K	SCP2	0.604408882	Down	Q1
LK(1)SDTAAAVR	UBA1	0.460485062	Down	Q1
LVAMK(1)FLR	NME2	1.270622178	Up	Q3
LFVGGIK(1)EDTEEHHLR	HNRNPA2B1	1.265091219	Up	Q3
LK(1)QIEHTLNEK	PRKACB	1.657300426	Up	Q4
AK(1)EDFLK	PRKACB	0.774035457	Down	Q2
GEILFFK(1)DR	MMP8	0.824094151	Down	Q2
IEVEKPFIAIAK(1)E	PPIB	0.463367882	Down	Q1
GDGTGGK(1)SIYGER	PPIB	0.524477713	Down	Q1
TVPK(1)TVDNFVALATGEK	PPIB	0.752950386	Down	Q1
KVESTK(1)TDSR	PPIB	0.508604004	Down	Q1
FPDENFK(1)LK	PPIB	0.55299558	Down	Q1
SK(1)MIYASSK	CFL1	0.687517342	Down	Q1
MLPDK(1)DCR	CFL1	1.833797515	Up	Q4
HELQANCYEEVK(1)DR	CFL1	2.91642882	Up	Q4
SSTPEEVK(1)K	CFL1	0.752193898	Down	Q1
VFNDMK(1)VR	CFL1	0.384673175	Down	Q1
HLFQEK(1)K	MPST	1.277794632	Up	Q3
EK(1)GCVTEVK	CTSS	0.753762104	Down	Q1
AQSELAHQK(1)K	PSMA1	1.219201851	Up	Q3
HEIVPK(1)DIR	PSMA3	0.525358445	Down	Q1
LSAEK(1)VEIATLTR	PSMA4	0.800652629	Down	Q2
VLMEK(1)ELPGFLQSGK	S100P	1.227295113	Up	Q3
YFEK(1)AGLK	S100P	0.72179505	Down	Q1
DK(1)DAVDK	S100P	2.144745081	Up	Q4
LTPK(1)IGFPWSEIR	MSN	0.659602792	Down	Q1
LNK(1)DQWEER	MSN	2.323091315	Up	Q4
ESPLLK(1)FR	MSN	0.599581639	Down	Q1
TTEAEK(1)NER	MSN	1.729470372	Up	Q4
VLEQHK(1)LNK	MSN	0.648782688	Down	Q1
LK(1)QIEEQTK	MSN	1.558876952	Up	Q4
EK(1)EELMER	MSN	0.818627259	Down	Q2
AQSEAEK(1)LAK	MSN	1.303896842	Up	Q4
NISFNDK(1)K	MSN	0.743401898	Down	Q1
AQMVQEDLEK(1)TR	MSN	1.805964706	Up	Q4
QEAEAK(1)EALLQASR	MSN	1.245608565	Up	Q3
HQK(1)QMER	MSN	1.695992533	Up	Q4
EMAEK(1)EK	MSN	1.97678165	Up	Q4
VAGIHK(1)K	RPL13	0.218968789	Down	Q1
YSGK(1)EGDK	S100A4	1.556989443	Up	Q4
SELK(1)ELLTR	S100A4	1.648573142	Up	Q4
TMSAK(1)EK	HMGB2	0.668021265	Down	Q1
QATENAK(1)EEVR	EEF1G	0.477419355	Down	Q1

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
AK(1)VIAAEGEMNASR	STOM	1.695201942	Up	Q4
VEIK(1)DVK	STOM	0.684892791	Down	Q1
LPDSFK(1)DSPSK	STOM	1.715367954	Up	Q4
AK(1)LAEQAER	YWHAQ	0.552727381	Down	Q1
NLLSVAYK(1)NVVGGRR	YWHAQ	1.681932745	Up	Q4
NVLINK(1)DIR	CALR	0.621290017	Down	Q1
DK(1)GLQTSQDAR	CALR	0.622887701	Down	Q1
LK(1)EEEEEDK	CALR	0.830004336	Down	Q2
GK(1)NVLINK	CALR	0.821704027	Down	Q2
QMK(0.989)DK(0.011)QDEEQR	CALR	0.625269494	Down	Q1
VHVIFNYK(1)GK	CALR	1.515375655	Up	Q4
AK(0.99)IDDPTDSK(0.01)PEDWDKPEHIP	CALR	0.829308566	Down	Q2
DPDAK				
AAEK(1)QMK	CALR	1.213897281	Up	Q3
AK(1)HHAISAK	CANX	1.738341793	Up	Q4
K(1)DDTDDEIAK	CANX	0.5245946	Down	Q1
LPGDK(1)GLVLMR	CANX	1.339275104	Up	Q4
YK(1)SQDPR	TKT	2.712617191	Up	Q4
NSTFSEIFK(1)K	TKT	0.639483648	Down	Q1
ELPSGK(1)K	PRDX6	0.785865117	Down	Q2
AAK(1)LAPEFAK	PRDX6	0.802381076	Down	Q2
VVFVFGPK(1)K	PRDX6	0.465584404	Down	Q1
NIVAAMK(1)AHGVVDK	BLVRB	0.657934858	Down	Q1
THLPGFVEQAEALK(1)AK	PRDX5	0.586559035	Down	Q1
VNLAELFK(1)GK	PRDX5	0.625566751	Down	Q1
AHK(1)AEGK	PRDX5	0.420712035	Down	Q1
TADGIVSHLK(1)K	PDIA3	0.607095994	Down	Q1
VMMVAK(1)K	PDIA3	0.656798359	Down	Q1
EAATSNLK(1)K	PPP2R1A	0.612098624	Down	Q1
K(1)IESFGSK	PPIF	0.672575862	Down	Q1
ADVVPK(1)TAENFR	PPIF	0.470623351	Down	Q1
NLGTTK(1)K	ADSS	0.505099119	Down	Q1
FMK(1)EATTNAPFR	SERPINB1	2.138234428	Up	Q4
GTVVAEK(1)DRPHEGTR	CORO1A	2.519529101	Up	Q4
GLEVNK(1)CEIAR	CORO1A	1.653559555	Up	Q4
AK(1)LAEQAER	YWHAQ	0.409726523	Down	Q1
SAAYAK(1)K	STIP1	1.208730032	Up	Q3
ETKPEPMEEDLPENK(1)K	STIP1	1.367488322	Up	Q4
NQK(1)DPGVLDR	S100A11	1.431458542	Up	Q4
LSEYGVVK(1)TDEGIAYR	PRDX2	0.362130178	Down	Q1
LSDYK(1)GK	PRDX2	0.429800968	Down	Q1
PAPDFK(1)ATAVVDGAFK	PRDX2	0.472761646	Down	Q1
ATAVVDGAFK(1)EVK	PRDX2	0.792159763	Down	Q2
GLFIIDGK(1)GVLR	PRDX2	0.573671568	Down	Q1
AVSEGYK(1)DFR	CDA	0.326194446	Down	Q1
EMTNHQK(1)K	KIF5B	0.730276172	Down	Q1
EHLNK(1)VQTANEVK	KIF5B	0.709769777	Down	Q1
LSLSTK(1)LK	MYH9	0.768611458	Down	Q1
VK(1)LQEMEGTVK	MYH9	1.468710155	Up	Q4
KLQAQMK(1)DCMR	MYH9	1.270554017	Up	Q3
VAAYDK(1)LEK	MYH9	0.830847397	Down	Q2
IIGLDQVAGMSETALPGAFK(1)TR	MYH9	3.167668701	Up	Q4
EQLEEEAAK(1)HNLEK	MYH9	0.598468935	Down	Q1
QK(1)HSQAVEELAEQLEQTK	MYH9	0.741681161	Down	Q1
QSACNLEK(1)K	MYH9	0.559825211	Down	Q1
HEEK(1)VAAYDK	MYH9	0.413034926	Down	Q1
TDLLLEPYNK(1)YR	MYH9	0.767587743	Down	Q1
YK(1)ASITALEAK	MYH9	1.798482429	Up	Q4

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
VK(1)ANLEK	MYH9	0.72619416	Down	Q1
CQHLQAEEK(1)K	MYH9	0.584062749	Down	Q1
IAEFTTNLTETEEEEK(1)SK	MYH9	0.822958467	Down	Q2
QVEDEK(1)NSFR	MYH9	0.828129336	Down	Q2
HSQAVEELAEQLEQTK(1)R	MYH9	1.71694321	Up	Q4
FDQLLAEEK(1)TISAK	MYH9	0.816740625	Down	Q2
QK(1)LSLSTK	MYH9	0.740915189	Down	Q1
K(1)LEMDLK	MYH9	1.371278757	Up	Q4
TLEEEAK(1)THEAQIQEMR	MYH9	1.27665846	Up	Q3
NFINNPLAQADWAAK(1)K	MYH9	2.177246199	Up	Q4
AK(1)QTLENER	MYH9	0.772769903	Down	Q2
DEQSEEK(1)K	MYH9	1.312701566	Up	Q4
ATDK(1)SFVEK	MYH9	0.639375001	Down	Q1
DLEAHIDSANK(1)NR	MYH9	1.799824557	Up	Q4
IAQLEEQLDNETK(1)ER	MYH9	1.331234052	Up	Q4
QAQQRDELADEIANSSGK(1)GALALEEK	MYH9	2.324905183	Up	Q4
INK(1)ALDK	MYH9	0.466046285	Down	Q1
AGK(1)LDPHLVLDQLR	MYH9	1.711893074	Up	Q4
GDSEHK(1)R	MYH9	1.541789946	Up	Q4
TELADK(1)VTK	MYH9	0.725006249	Down	Q1
LQLEK(1)VTTEAK	MYH9	0.606071989	Down	Q1
GALALEEK(1)R	MYH9	1.567752154	Up	Q4
SHAQK(1)NENAR	MYH9	3.681486584	Up	Q4
K(1)DQGELER	MYH9	0.652374524	Down	Q1
SFVEK(1)VMQEQGTHPK	MYH9	1.200120117	Up	Q3
DDVGK(1)SVHELEK	MYH9	1.917281475	Up	Q4
EVSSLK(1)NK	MYH9	1.452718532	Up	Q4
NAEQYK(1)DQADK	MYH9	1.551682213	Up	Q4
FVSELWK(1)DVDR	MYH9	0.526358158	Down	Q1
TEMEDLMSSK(1)DDVGK	MYH9	1.241608596	Up	Q3
VTTEAK(1)LK	MYH9	0.428663696	Down	Q1
LK(1)DVLLQVDDERR	MYH9	2.242997955	Up	Q4
LQEMEGTVK(1)SK	MYH9	1.736054325	Up	Q4
TVGQLYK(1)EQLAK	MYH9	0.51974547	Down	Q1
ANLEK(1)AK	MYH9	0.353363152	Down	Q1
LVWVPSDK(1)SGFEPASLK	MYH9	1.389413991	Up	Q4
QQQLTAMK(1)VLQR	MYH9	1.475491006	Up	Q4
EVQQK(1)IEK	TAGLN2	1.959851633	Up	Q4
ILDWHVANTDK(1)K	TALDO1	0.519775184	Down	Q1
AAQASDLEK(1)IHLDEK	TALDO1	0.60374751	Down	Q1
FAADAVK(1)LER	TALDO1	0.405400502	Down	Q1
IHLDEK(1)SFR	TALDO1	0.216638353	Down	Q1
LSFDK(1)DAMVAR	TALDO1	0.51516729	Down	Q1
TVEGAGSIAAATGFVK(1)K	SNCA	0.574339029	Down	Q1
AK(1)EGVVAAAEK	SNCA	1.650096802	Up	Q4
NTTIPTK(1)K	HSPA9	0.475176883	Down	Q1
TSTGAPAAIK(1)K	CAPG	0.521716658	Down	Q1
EK(1)MDLTAK	MDH1	2.211384777	Up	Q4
ITDLMEK(1)K	MNDA	1.371642692	Up	Q4
ELALQPK(1)DDIVDR	GARS	1.719348321	Up	Q4
FHK(1)FDADQK	GPD2	1.631687042	Up	Q4
AK(1)EDVLQK	UTRN	0.164973498	Down	Q1
EDSNLTLQEK(1)K	IQGAP1	2.652844551	Up	Q4
LVEDMENK(1)IR	CAPZB	1.634664401	Up	Q4
FPLELK(1)K	LIMS1	2.502632806	Up	Q4
IYIDDNNK(1)K	PIP4K2A	1.427466176	Up	Q4
AAHAAK(1)TVK	PIP4K2A	1.80379655	Up	Q4
ELPTLK(1)DNDFINEGQK	PIP4K2A	0.827409704	Down	Q2

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
GVQLQTHPNVDK(1)K	ARCN1	0.630796378	Down	Q1
LHVENEDK(1)K	ARCN1	0.743008029	Down	Q1
GEFNEK(1)K	CD151	0.417347352	Down	Q1
QLK(1)DSEER	GSS	0.679207434	Down	Q1
HK(1)LDVTSVEDYK	CCT5	1.440979437	Up	Q4
GK(1)LDGNQDLIR	IDH2	2.421225716	Up	Q4
TDFDK(1)NK	IDH2	0.532434169	Down	Q1
NK(1)IWYEHR	IDH2	1.723220192	Up	Q4
NVQLYK(1)MR	PSMB2	1.530625394	Up	Q4
GSFDISCDKDNK(1)R	CAMP	0.449894504	Down	Q1
TTQQSPEDCDFK(1)K	CAMP	0.43329468	Down	Q1
K(1)VLHMDR	GDI2	0.563712835	Down	Q1
AVDDGVNTFK(1)VLTR	CCT8	0.479818963	Down	Q1
VVGAQSLK(1)EMVSK	PGD	0.631103842	Down	Q1
AK(1)GILFVGSVSGGEEGAR	PGD	0.510120687	Down	Q1
CLSSLK(1)DER	PGD	0.693986542	Down	Q1
EMVSK(1)LK	PGD	0.704434941	Down	Q1
FQFDGDK(1)K	PGD	0.638834149	Down	Q1
YK(1)EALLGR	ARHGDIA	1.828767123	Up	Q4
SIQEIQLDK(1)DDESLR	ARHGDIA	1.573951435	Up	Q4
IHFK(1)VNR	ARHGDIB	0.397757296	Down	Q1
TGVK(1)VDK	ARHGDIB	0.748888859	Down	Q1
YIEVFK(1)SHR	HNRNPF	1.530876543	Up	Q4
ILSYK(1)JGK	CAPZA1	0.570145057	Down	Q1
ISFK(1)FDHLR	CAPZA1	0.585589667	Down	Q1
LLGQFSEK(1)ELAAEK	BLVRA	1.371626817	Up	Q4
ELAAEK(1)K	BLVRA	1.246504254	Up	Q3
GQPDEELK(0.044)PK(0.956)K	YARS	1.643337453	Up	Q4
EK(1)ESVNAK	USP14	1.277792857	Up	Q3
EK(1)IEAEK	RAD23A	0.68191482	Down	Q1
LLLSK(1)GADK	MTPN	1.419941983	Up	Q4
GADK(1)TVK	MTPN	1.979124692	Up	Q4
DYVAK(1)GEDVNR	MTPN	1.451050115	Up	Q4
ILCHK(1)FMR	ARPC4	0.51859592	Down	Q1
TATPQQAQEVHEK(1)LR	TPI1	1.29212444	Up	Q3
VVFEQTK(1)VIADNVK	TPI1	0.623354818	Down	Q1
VIADNVK(1)DWSK	TPI1	0.552684635	Down	Q1
VLGNPK(1)SDEMNVK	MYL6	0.790147123	Down	Q2
K(1)EELTLEGIR	EIF4A1	0.73026118	Down	Q1
QKPITPETAEK(1)LAR	CDC42	0.782462812	Down	Q2
NVFDEAILAALEPPEPK(1)K	CDC42	0.656267155	Down	Q1
TGENVEDAFLEAAK(1)K	RAB14	1.42549823	Up	Q4
LK(1)LSEELSGGR	ACTR3	1.215905196	Up	Q3
ESAK(1)VGDAQQR	ACTR3	0.773210243	Down	Q2
QYTGINAISK(1)K	ACTR3	0.478850596	Down	Q1
QEYQEK(1)GVR	ACTR2	0.692499505	Down	Q1
VLK(1)GDVEK	ACTR2	0.798092372	Down	Q2
VK(1)DTDDVPMILVGNK	RAP1B	0.797329725	Down	Q2
VKDTDDVPMILVGNK(1)CDLEDER	RAP1B	2.1065549	Up	Q4
EYK(1)LVVLGSGGVGK	RAP1B	1.996241688	Up	Q4
TSADGNEK(1)K	YWHAG	0.734220702	Down	Q1
EAFSLFDK(1)DGDGTITTK	CALM1	2.593774418	Up	Q4
MK(1)DTDSEEEIR	CALM1	2.351555996	Up	Q4
NLLSVAYK(1)NVIGAR	YWHAE	1.292823397	Up	Q3
MK(1)GDYHR	YWHAE	0.711884183	Down	Q1
AHPPELK(1)K	SNRPG	0.727966383	Down	Q1
TVTAMDVVYALK(1)R	HIST1H4A	3.729548591	Up	Q4
DAVTYTEHAK(1)R	HIST1H4A	1.338684654	Up	Q4

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
AK(1)SIVFHR	RAN	3.465207923	Up	Q4
HVVFGK(1)VK	PPIA	0.697625665	Down	Q1
VSFELFADK(1)VPK	PPIA	0.465754584	Down	Q1
TEWLDGK(1)HVVFGK	PPIA	0.282740095	Down	Q1
VK(1)EGMNIVEAMER	PPIA	0.483144242	Down	Q1
ALSTGEK(1)GFGYK	PPIA	0.395557535	Down	Q1
SIYGEK(1)FEDENFILK	PPIA	0.709044195	Down	Q1
FMLGK(1)QEVIR	FKBP1A	0.57344703	Down	Q1
FGNDVQHFK(1)VLR	GRB2	0.798651517	Down	Q2
AK(1)AEEMLSK	GRB2	0.743720011	Down	Q1
DDKDTIEK(1)LK	RAC1	1.848684067	Up	Q4
LDLRDDK(1)DTIEK	RAC1	1.544407022	Up	Q4
TIINADK(1)DGDGR	PPP3R1	1.48003268	Up	Q4
TEGAEK(1)K	YWHAZ	0.553987421	Down	Q1
AK(1)LAEQAER	YWHAZ	0.68287493	Down	Q1
VFYLK(1)MK	YWHAZ	1.333450815	Up	Q4
YLAEVAAGDDK(1)K	YWHAZ	1.358344844	Up	Q4
VVSSIEQK(1)TEGAEK	YWHAZ	1.48607753	Up	Q4
NELVQK(1)AK	YWHAZ	2.642421312	Up	Q4
MK(1)GDYYR	YWHAZ	0.551760235	Down	Q1
K(1)EMQPTHPIR	YWHAZ	0.823949734	Down	Q2
NLLSVAYK(1)NVVGAR	YWHAZ	0.508378216	Down	Q1
GIVDQSQAYQEAFEISK(1)K	YWHAZ	0.686924059	Down	Q1
MQK(1)EITALAPSTMK	ACTG1	0.75296121	Down	Q1
HQGVMVGMGQK(1)DSYVGDEAQSK	ACTG1	1.29050185	Up	Q3
K(1)DLYANTVLSGGTTMYPGIADR	ACTG1	1.59052348	Up	Q4
IK(1)IIAPPER	ACTG1	0.73180527	Down	Q1
EITALAPSTMK(1)IK	ACTG1	0.414826327	Down	Q1
VAPEEHPVLLTEAPLNPK(1)ANR	ACTG1	1.610312914	Up	Q4
AEVSELK(1)CGDLEELK	TPM4	4.574349481	Up	Q4
LEK(1)TIDDLEEK	TPM4	4.628966804	Up	Q4
TVAK(1)LEK	TPM4	2.679032952	Up	Q4
EAK(1)HIAEEADR	TPM4	1.909749389	Up	Q4
NVTNNLK(1)SLEAASEK	TPM4	1.962326435	Up	Q4
EK(1)AEGDVAALNR	TPM4	2.49047669	Up	Q4
LLSDK(1)LK	TPM4	2.564422249	Up	Q4
LSVDYGK(1)K	TUBA4A	1.793106109	Up	Q4
GDVVPK(1)DVNAAIAAIK	TUBA4A	1.884068129	Up	Q4
QLFHPEQLITGK(1)EDAANNYAR	TUBA4A	3.167095116	Up	Q4
LDHK(1)FDLMYAK	TUBA4A	4.807450901	Up	Q4
FFESFGDLSTPDVAVMGNPK(1)VK	HBB	2.918451276	Up	Q4
SAVTALWGK(1)VNVDEVGGEALGR	HBB	4.545084474	Up	Q4
VVAGVANALAHK(1)YH	HBB	0.586410535	Down	Q1
GTFATLSELHCDK(1)LHVDPENFR	HBB	0.648548863	Down	Q1
VK(1)AHGK(1)K	HBB	0.519289326	Down	Q1
VLSPADK(1)TNVK(1)AAWGK	HBA1	1.568691719	Up	Q4
TYFPFDLSHGSAQVK(1)GHGK	HBA1	1.466819673	Up	Q4
AAWGK(1)VGAHAGEYGAEALER	HBA1	0.595452322	Down	Q1
LLTHHK(1)DHFTK	CCT2	0.776243155	Down	Q2
EFTK(1)LEEVLTK	GSTO1	0.558468233	Down	Q1
LNECVDHTPK(1)LK	GSTO1	0.735042748	Down	Q1
LEEVLTK(1)K	GSTO1	0.520772974	Down	Q1
NKPEWFFK(1)K	GSTO1	0.591051134	Down	Q1
TK(1)ELTSELK	LCN2	0.758510293	Down	Q1
ELTSELK(1)ENFIR	LCN2	0.461055276	Down	Q1
EDK(1)DPQK	LCN2	2.183096734	Up	Q4
K(1)GHFDTLSK	S100A12	0.612909656	Down	Q1
GHFDTLSK(1)GELK	S100A12	0.772561699	Down	Q2

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
AAHYHTHK(1)E	S100A12	1.655428021	Up	Q4
MYK(1)EEGLK	SLC25A3	1.415440724	Up	Q4
EK(1)GSSASLVLK	SLC25A3	2.095005928	Up	Q4
VIALK(1)AGK	CLTC	1.449969731	Up	Q4
AQLQK(1)GMVK	CLTC	0.824763582	Down	Q2
AHIAQLCEK(1)AGLLQR	CLTC	2.725871314	Up	Q4
VNIPK(1)VLR	CLTC	1.418855698	Up	Q4
VDK(1)LDASESLR	CLTC	1.683901126	Up	Q4
HLYTK(1)DIDIHEVR	HNRNPU	1.303028731	Up	Q4
IQEK(1)VDSIDDR	SPTBN1	0.804824817	Down	Q2
EK(1)LTGLHK	SPTBN1	0.599444341	Down	Q1
HAEMVHTGLK(1)LER	CAP1	1.261957087	Up	Q3
EYK(1)DVDK	CAP1	0.70287358	Down	Q1
ISEK(1)EEVTTR	LMNB2	0.480725262	Down	Q1
AQLAK(1)AEDGHAVAK	LMNB2	0.542666776	Down	Q1
YLAEVASGEK(1)K	YWHAH	1.728870293	Up	Q4
FNVSYLK(1)R	CLC	0.401071787	Down	Q1
GDASLK(1)MDK	CD47	1.237892819	Up	Q3
IEVSQLLK(1)GDASLK	CD47	0.695978391	Down	Q1
K(1)GSVVTNER	MMRN1	3.762294648	Up	Q4
VIEPK(1)DIHAK	SELENBP1	0.75805709	Down	Q1
HSGIDFK(1)QLNFLT	ILK	0.476476527	Down	Q1
AEK(1)MGQNLNR	ILK	0.608478087	Down	Q1
HK(1)ASVEDADTQSK	DCTN2	0.441127798	Down	Q1
LHK(1)AQEEHR	STIM1	1.525376544	Up	Q4
GCFK(1)AIVAGDQNVEYK	FHL1	3.919102844	Up	Q4
EVHYK(1)NR	FHL1	2.513895265	Up	Q4
FAK(1)HCVK	FHL1	0.829016199	Down	Q2
AK(1)LGDSHDLQR	SPTAN1	0.794986841	Down	Q2
TGTDK(1)TLVK	COTL1	1.463343129	Up	Q4
K(1)ELEEDFIK	COTL1	1.45908092	Up	Q4
VMDQK(1)EHK	HNRNPD	1.754131316	Up	Q4
EEEPVK(1)K	HNRNPD	2.451163581	Up	Q4
EK(1)EAELK	06-Sep	0.679325414	Down	Q1
EAEK(1)ELHEK	06-Sep	1.386376852	Up	Q4
ADAISK(1)SELT	06-Sep	1.607166204	Up	Q4
LHQDEK(1)K	06-Sep	0.757846213	Down	Q1
SLDLVTMK(1)K	06-Sep	0.778271794	Down	Q2
EAELEAK(1)ER	DCTN1	0.830835195	Down	Q2
EK(1)QEAAPLVR	RASA3	1.415265133	Up	Q4
NSLDDSAK(1)K	SPCS2	0.540514583	Down	Q1
VIPGAAEK(1)IER	02-Sep	1.669354207	Up	Q4
LTPEWK(1)K	PDIA6	0.726633201	Down	Q1
SAEAEQSK(1)R	PLEC	0.613216806	Down	Q1
ASFEK(1)AAAGK	PLEC	0.632139734	Down	Q1
VTVEK(1)VIK	PLEC	0.784303292	Down	Q2
QK(1)GLVEDTLR	PLEC	1.419251221	Up	Q4
SK(1)EQAELEAAR	PLEC	0.573184485	Down	Q1
NTNMTAK(1)K	PLEC	0.529750665	Down	Q1
EK(1)EAENER	PLEC	0.140229236	Down	Q1
EVGSIIGK(1)K	PCBP1	0.463482607	Down	Q1
LK(1)HLNLGMNR	RSU1	1.267581306	Up	Q3
HMQANPEPPK(1)K	RSU1	2.574329637	Up	Q4
LALEGVEK(1)ER	MAPRE2	1.850478658	Up	Q4
ANIK(1)DLSQILK	STXBP2	0.820526951	Down	Q2
HFK(1)GSVEK	STXBP2	0.590488372	Down	Q1
EHVAK(1)MK	07-Sep	0.804344992	Down	Q2
EIQEHK(1)IK	07-Sep	0.701925581	Down	Q1

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
AAMDNSEIAGEK(1)K	IMMT	1.369233606	Up	Q4
SVIENAK(1)K	IMMT	0.541386501	Down	Q1
SEASSNLK(1)K	INF2	0.570996908	Down	Q1
VSAVEVWGK(1)EENLR	KIF26B	0.456582999	Down	Q1
AAGAGK(1)VTK	EEF1A1P5	2.010918207	Up	Q4
FEK(1)EAAEMGK	EEF1A1P5	1.306198153	Up	Q4
DQGK(1)VTDTASMK	PLBD1	0.473168885	Down	Q1
FEK(1)ELSK	OLFM4	0.52369862	Down	Q1
DAHVAK(1)GK	BZW1	0.687682183	Down	Q1
EQADFALEALAK(1)ATYER	MYH14	1.651779063	Up	Q4
SFFEAK(1)K	TMED4	0.588956851	Down	Q1
YYSFFDLDPK(1)TDPVR	FERMT3	1.596704913	Up	Q4
LEFEK(1)HR	TRIM58	0.393613706	Down	Q1
GLQQENHLK(1)IR	UBASH3B	1.511187873	Up	Q4
TEVHVVEPHK(1)K	UBASH3B	0.799381336	Down	Q2
NLDITK(1)K	ARHGEF1	0.476937191	Down	Q1
NDEELNK(1)LLGR	HIST1H2AC	2.110383686	Up	Q4
K(1)LDEFGR	ATP2A3	1.244824605	Up	Q3
AVNQDK(1)K	ATP2A3	0.534067353	Down	Q1
VIFLSK(1)GK	WBP2	0.772018461	Down	Q2
EILK(1)EQENR	PARK7	0.772262914	Down	Q2
SQDK(1)TLK	MGLL	1.615105357	Up	Q4
TATQLAVNK(1)IK	CCT7	0.552954158	Down	Q1
NDEELNK(1)LLGK	HIST1H2AJ	8.419275745	Up	Q4
VRDEK(1)ER	ESYT1	0.355925072	Down	Q1
TIELDGK(1)TIK	RAB1B	1.613846812	Up	Q4
DK(1)DEAEQAVSR	PSTPIP2	0.790519796	Down	Q2
SLITFVVK(1)HLNK	PARVB	1.794051631	Up	Q4
NVK(1)DAMAK	RTN4	0.453927813	Down	Q1
DAMAK(1)IQAK	RTN4	0.818625531	Down	Q2
TDAISEEK(1)LR	SAR1A	1.587254497	Up	Q4
EK(1)IEASR	ARL8B	0.535910763	Down	Q1
VDTTK(1)VK	CMTM6	0.596188554	Down	Q1
SK(1)LLPLEEHYR	EHD3	1.481731634	Up	Q4
ITGANAK(1)K	EHD3	7.625227122	Up	Q4
ALK(1)NHEDK	EHD3	0.588439967	Down	Q1
NEK(1)GQLGHGDTK	RCC2	0.747802541	Down	Q1
HHLEAVQNAK(1)K	BIN2	0.337727034	Down	Q1
TAK(1)AEEEFNK	BIN2	0.71340254	Down	Q1
AVETK(1)DER	BIN2	0.696989871	Down	Q1
VK(1)DPNSGLPK	DBNL	1.333088095	Up	Q4
TK(1)VEAFQTTISK	PSME2	0.826670522	Down	Q2
K(1)QEIVAEK	CORO1C	1.561858807	Up	Q4
KQEIVAEK(1)EK	CORO1C	1.201225874	Up	Q3
TTDTASVQNEAK(1)LDEILK	CORO1C	1.979172444	Up	Q4
FFK(1)LHER	CORO1C	1.589742732	Up	Q4
GLDVNK(1)CEIAR	CORO1C	2.711663369	Up	Q4
EVEAAK(1)K	PACSIN2	0.441809794	Down	Q1
AAK(1)DVFNK	VDAC3	1.203638445	Up	Q3
GVIQHK(1)EK	UFC1	1.281037834	Up	Q3
MATNAAAQNAIK(1)K	TLN1	0.779842864	Down	Q2
MTK(1)GITMATAK	TLN1	0.780408954	Down	Q2
TVSDSIK(1)K	TLN1	0.723104605	Down	Q1
ASDNLVK(1)AAQK	TLN1	0.78573684	Down	Q2
TTNPTAK(1)R	TLN1	0.705204879	Down	Q1
AGALQCSPSDAYTK(1)K	TLN1	1.273516222	Up	Q3
TLLRDEK(1)K	TLN1	0.090682824	Down	Q1
IPEAPAGPPSDFGLFLSDDDPK(1)K	TLN1	0.472935846	Down	Q1

Table SI. Continued. Detailed information for all identified crotonylated peptides and their corresponding proteins between the immunoglobulin A nephropathy and negative control groups.

Modified sequence	Gene name	IgA/NC ratio	Regulated type	Quant category
DVAK(1)ALGDLISATK	TLN1	0.464441067	Down	Q1
TK(1)EVIQEWNLNIK	TLN1	0.672393674	Down	Q1
TAK(1)VLVEDTK	TLN1	0.733862754	Down	Q1
VLVEDTK(1)VLVQNAAGSQEK	TLN1	0.397512346	Down	Q1
K(1)IFQAHK	TLN1	0.644559981	Down	Q1
TAK(1)AIAVTVQEMVTK	TLN1	0.421876245	Down	Q1
NCGQMSEIEAK(1)VR	TLN1	1.601704245	Up	Q4
AAAGK(1)VGDDPAVWQLK	TLN1	0.415177799	Down	Q1
LK(0.001)PLPGETMEK(0.999)CTQDL GNSTK	TLN1	3.38014905	Up	Q4
NK(1)MDESK	TLN1	4.147863343	Up	Q4
TVK(1)AVEDEATK	TLN1	0.526612491	Down	Q1
VK(1)ADQDSEAMK	TLN1	1.276340811	Up	Q3
K(1)EEITGTLR	TLN1	0.655851183	Down	Q1
TIK(1)ALDGAFTEENR	TLN1	1.401773563	Up	Q4
AQVVSNLK(1)GISMSSSK	TLN1	0.805151881	Down	Q2
ELMEEK(1)K	TLN1	0.57939308	Down	Q1
AVEDEATK(1)GTR	TLN1	1.22334462	Up	Q3
QK(1)LHTDDELNWLHDHGR	TLN1	2.196908621	Up	Q4

IgA, immunoglobulin A nephropathy; NC, negative control.