

## Supplementary Information for

### **Proteomic identification of an Upregulated Isoform of Annexin A3 in the Spinal Cords of Rats in a Neuropathic Pain Model**

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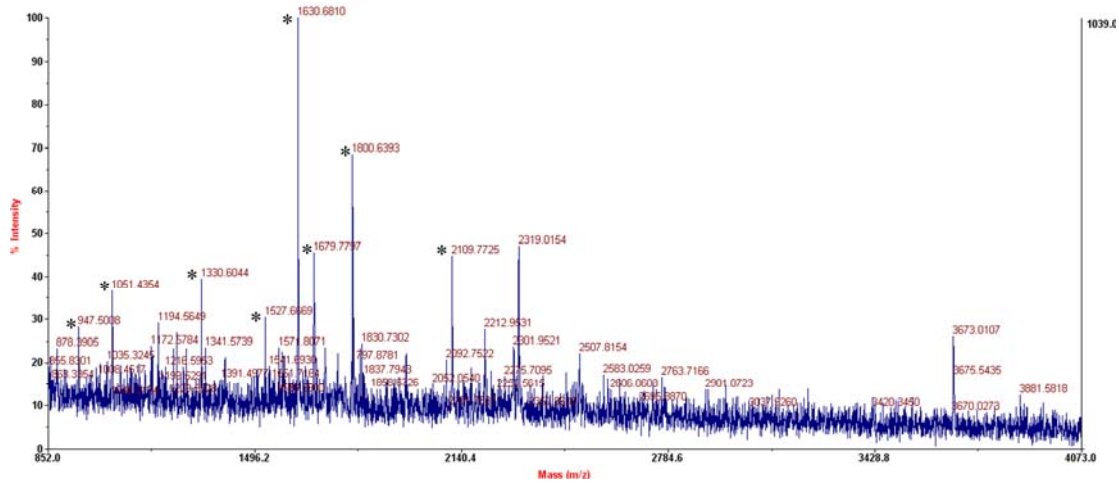
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## A. MALDI-TOF MS spectrum (spot 1)



## B. Peptides detected by MALDI-TOF-MS

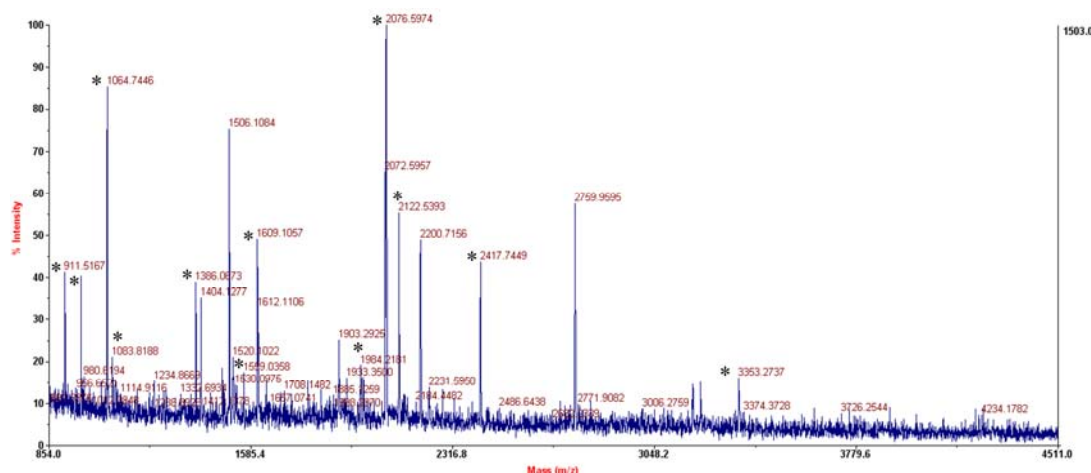
Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
46-53	MDELQLFR	1051.4330	+
46 - 60	MDELQLFRGDTVLLK	1777.7970	+
66 - 83	EAVCIVLSDDTCSDEKIR	2109.7740	+
148 - 155	KGDIFLVR	947.4930	+
324 - 338	IVSQLLTLMDGLKQR	1714.8550	+
454 - 465	WALSQSNPSALR	1329.6130	+
600 - 614	VINQILTEMDGMSTK	1679.7840	+
754 - 766	KYEMFAQTLQQSR	1629.6840	+
755 - 766	YEMFAQTLQQSR	1501.6090	+

## C. Matched peptides (Bold Red) in the TERA amino acid sequence

1 MASGADSKGD DLSTAILKQK NRPNRLIVDE AINEDNSVVS LSQPK**MDELQ**  
**51 LFRGDTVLLK** GKKRREAVCI **VLSDDTCSDE KIR**MNRVVRN NLRVRLGDVI  
101 SIQPCPDVKY GKRIHVLPID DTVEGITGNL FEVYLKPYFL EAYRPIR**KGD**  
**151 IFLVR**GGMRA VEFKVVETDP SPYCIVAPDT VIHCEGEPIK REDEEESLNE  
201 VGYDDIGGCR KQLAQIKEMV ELPLRHPALF KAIGVKPPRG ILLYGPPGTG  
251 KTLIARAVAN ETGAFFFLIN GPEIMSKLAG ESESNLRKAF EEAENAPAI  
301 IFIDELDAIA PKREKTHGEV ERR**IVSQLLT LMDGLKQR**AH VIVMAATNRP  
351 NSIDPALRRF GRFDREVDIG IPDATGRLEI LQIHTKNMKL ADDVDLEQVA  
401 NETHGHVGAD LAALCSEAAL QAIRKKMDLI DLEDETIDAE VMNSLAVTMD  
451 DFR**WALSQSN PSALR**ETVVE VPQVTWEDIG GLEDVKRELQ ELVQYPVEHP  
501 DKFLKFGMTP SKGVLFYGP GCGKTLLAKA IANECQANFI SIKGPELLTM  
551 WGESEANVR EIFDKARQAA PCVLFFDEL DSIKARGGNI GDGGGAADR**V**  
**601 INQILTEMDG MSTK**KNVFI GATNRPDIID PAILRPGRLD QLIYIPLPDE  
651 KSRVAILKAN LRKSPVAKDV DLEFLAKMTN GFSGADLTEI CQRACKLAIR  
701 ESIESEIRRE RERQTNPSAM EVEEDDPVPE IRRDHFEEM RFARRSVSDN

751 DIR**KYEMFAQ TLQSR**GFGS FRFPSGNQGG AGPSQGSGGG TGGNVYTEDN  
801 DDDLYG

## A. MALDI-TOF MS spectrum (spot 2)



## B. Peptides detected by MALDI-TOF-MS

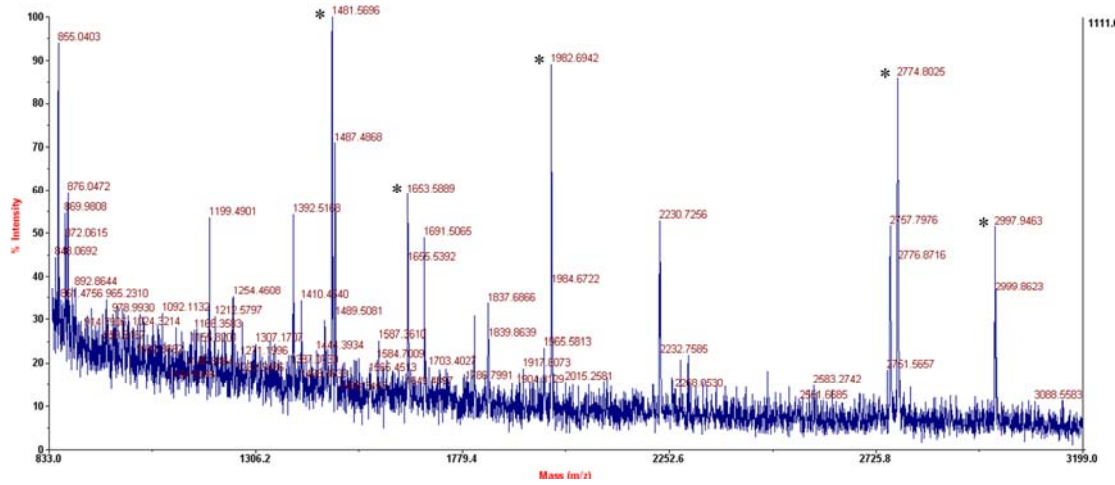
Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
63 - 68	FCYHER	911.5130	+
185 - 200	FASEIAGVDDLGGTTGR	1609.1020	+
247 - 266	KTESIDVMDAVGSNIVVSTR	2121.4770	+
248 - 266	TESIDVMDAVGSNIVVSTR	1993.3830	+
292 - 299	FAYDGLKR	969.6620	+
409 - 417	FEAPLNFAR	1064.7480	+
429 - 450	VALIGSPVDLTYRYDHLGDSPK	2416.7160	+
451 - 464	ILQDIASGNHEFSK	1559.0540	+
465 - 483	VLNAAKKPMVVLGSSALQR	1982.3960	+
471 - 483	KPMVVLGSSALQR	1386.0600	+
519 - 538	IASQVAALDLGYKPGVEAIR	2071.5630	+
563 - 592	DCFIVYQGHGHDVGAPIADVILPGAAYTEK	3214.0580	+
646 - 655	LGEVSPNLVR	1083.8080	+
646 - 673	LGEVSPNLVRYDDVEEANYFQQASELAK	3185.0730	+
674 - 702	LVDQEFLADPLVPPQLTIKDFYMTDSISR	3352.2110	+

## C. Matched peptides (Bold Red) in the NADH amino acid sequence

**1** MLRIPVKRAL IGLSKSPKGY VRSTGTAASN LIEVFVDGQS VMVEPGTTVL  
**51** QACEKVMQI PR**FCYHER**LS VAGNCRMCLV EIEKAPKVVA ACAMPVMKGW  
**101** NILTNSEKSK KAREGVMEFL LANHPLDCPI CDQGGECDLQ DQSMFSGSDR  
**151** SRFLEGKRAV EDKNIGPLVK TIMTRCIQCT RCIR**FASEIA GVDDLGGTTGR**  
**201** GNDMQVGTYI EKMFMSELSE NIIDICPVGA LTSKPYAFTA RPWETR**KTES**  
**251** **IDVMDAVGSN IVVSTR**TGEV MRILPRMHED INEEWISDKT **RFAVDGLKRQ**  
**301** RLTEPMVRNE **KGLTYTSWE DALSRVAGML QSFEGK**AVAA IAGGLVDAEA  
**351** LVALKDLLNK VSDTLCTEE IFPNAGAGTD LRSNYLLNTT IAGVEEADV  
**401** LLVGTNPR**FE APLNFAR**IRK SWLHNDLK**VA LIGSPVDLTY RYDHLGDSPK**

451 **ILQDIASGNH EFSKVLNAAK KPMVVLGSSA LQR**DDGAAIL AAVSSIAQKI  
501 RVASGAAAEW KVMNILHRIA **SQVAALDLGY KPGVEAIR**KN PPKLLFLLGA  
551 DGGCITRQDL PK**DCFIVYQG HHGDVGAPIA DVILPGAAYT E**KSATYVNTE  
601 GRAQQTKVAV TPPGLAREDW KIIRALSEIA GITLPYDTLD QVRN**RLGEVS**  
651 **PNLVRYDDVE EANYFQQASE LAKLVDQEFL ADPLVPPQLT IKDFYMTDSI**  
701 **SR**ASQTMAC VKAVTEGAQA VEEPSIC

## A. MALDI-TOF MS spectrum (spot3)



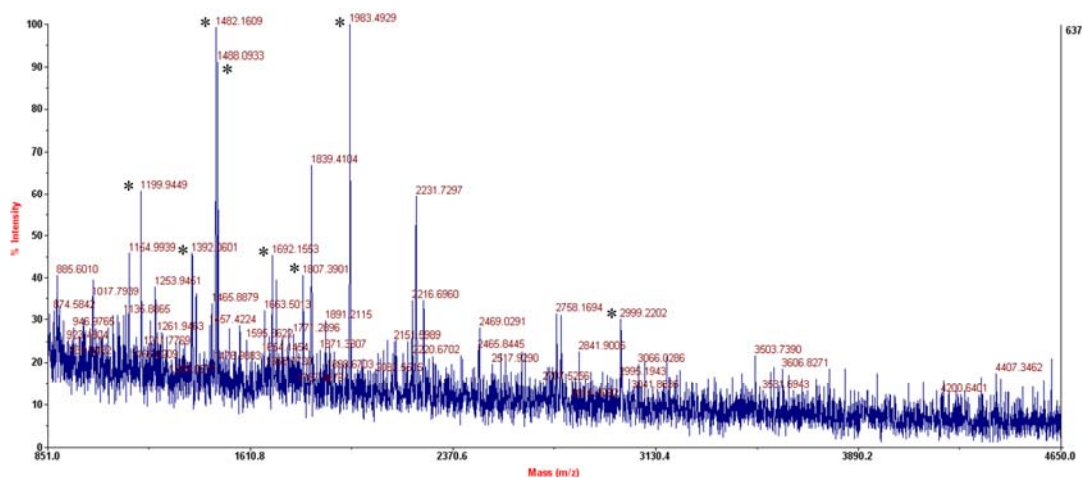
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
4 - 25	GPAVGIDLGTTYSCVGVFQHGK	2262.6820	+
57 - 72	NQVAMNPTNTVFDAGR	1805.5470	+
89 - 102	HWPFMVVNDAGRPK	1653.5380	+
138 - 155	TVTNAVVTVPAYFNDSQR	1981.6220	+
273 - 299	TLSSSTQASIEIDSLYEGIDFYTSITR	2996.9690	+
300 - 311	ARFEELNADLFR	1480.4660	+
424 - 447	QTQTFTTYSDNQPGVLIQVYEGER	2773.8670	+

## C. Matched peptides (Bold Red) in the HSC70 amino acid sequence

1 MSK**GPAVGID LGTTYSCVGV FQHGK**VEIIA NDQGNRTTPS YVAFTDTERL  
 51 IGDAAK**NQVA MNPTNTVFDA KRLIGRRFDD** AVVQSDMK**HW PFMVVNDAGR**  
 101 **PKVQVEYKGE** TKSFYPEEVS SMVLTKMKEI AEAYLGK**TVT NAVVTVPAYF**  
 151 **NDSQR**QATKD AGTIAGLNVL RIINEPTAAA IAYGLDKKVG AERNVLIFDL  
 201 GGGTFDVSIL TIEDGIFEVK STAGDTHLGG EDFDNRMVNH FIAEFKRKHK  
 251 KDISENKRAV RRLRTACERA KR**TLSSSTQA SIEIDSLYEG IDFYTSITRA**  
 301 **RFEELNADLF R**GTLDPVEKA LRDAKLDKSQ IHDIVLVGGS TRIPKIQKLL  
 351 QDFPNGKELN KSINPDEAVA YGAAVQAAIL SGDKSENVQD LLLLDVTPLS  
 401 LGIETAGGVM TVLIKRNTTI PTK**QTQTFTT YSDNQPGVLI QVYEGER**AMT  
 451 KDNLLGKFE LTGIPPAPRG VPQIEVTFDI DANGILNVSA VDKSTGKENK  
 501 ITITNDKGRL SKEDIERMVQ EAEKYKAEDE KQRDKVSSKN SLESYAFNMK  
 551 ATVEDEKLQG KINDEDKQKI LDKCNEIISW LDKNQTAEKE EFEHQKKELE  
 601 KVCNPIITKL YQSAGGMPGG MPGGFPGGA PPSGGASSGP TIEEVD

## A. MALDI-TOF MS spectrum (spot 4)



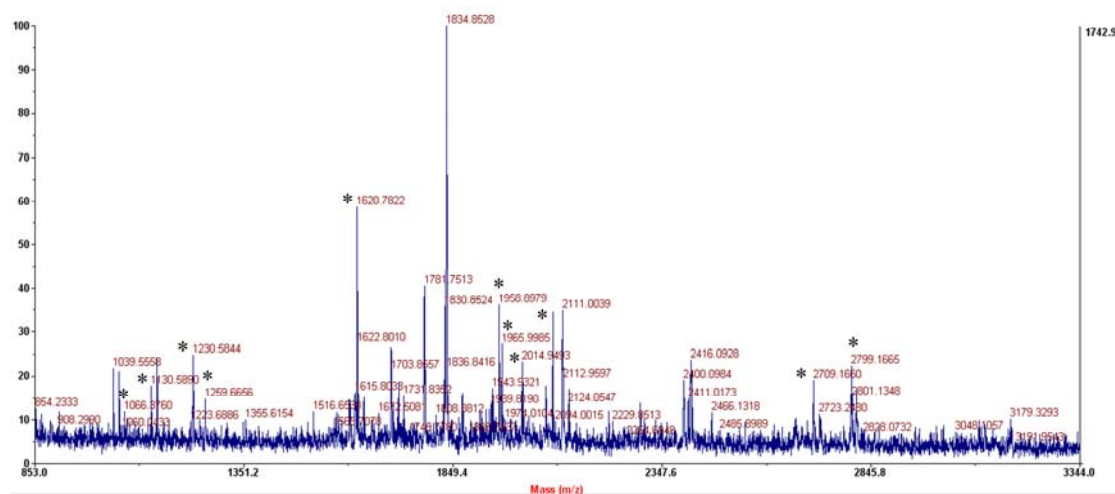
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
37 - 49	TTPSYVAFTDTER	1488.0990	+
57 - 72	NQVAMNPTNTVFDAGR	1806.3720	+
138 - 155	TVTNAVVTVPAYFNDSQR	1982.5020	+
160 - 171	DAGTIAGLNVL	1199.9640	+
221 - 236	STAGDTHLGGEDFDNR	1692.1830	+
237 - 247	MVNHFIAEFKR	1392.0750	+
273 - 299	TLSSSTQASIEIDSLYEGIDFYTSITR	2998.1880	+
300 - 311	ARFEELNADLFR	1481.1550	+
326 - 342	LDKSQIHDIIVLVGGSTR	1838.4920	+
362 - 384	SINPDEAVAYGAAVQAAILSGDK	2260.7990	+
424 - 447	QTQTFTTYSNQPGLIQVYEGER	2775.0770	+

## C. Matched peptides (Bold Red) in the HSC70 amino acid sequence

1 MSKGA V G I D L G T T Y S C V G V F Q H G K V E I I A N D Q G N R **TTPS YVAFTDTER** L  
 51 I G D A A K **NQVA MNPTNTVFD** A K R L I G R R F D D A V V Q S D M K H W P F M V V N D A G R  
 101 P K V Q V E Y K G E T K S F Y P E E V S S M V L T K M K E I A E A Y L G K **TVT NAVVTVPAYF**  
 151 **NDSQR** Q A T K D **AGTIAGLNVL** R I I N E P T A A A I A Y G L D K K V G A E R N V L I F D L  
 201 G G G T F D V S I L T I E D G I F E V K **STAGDTHLGG EDFDNR** M V N H F I A E F K R K H K  
 251 K D I S E N K R A V R R L R T A C E R A K R **TLSSSTQA SIEIDSLYEG IDFYTSITRA**  
 301 **RFEELNADLF** R G T L D P V E K A L R D A K **LDKSQ IHDIIVLVGG** S T R I P K I Q K L L  
 351 Q D F F N G K E L N **KSINPDEAVA YGAAVQAAIL** S G D K S E N V Q D L L L L D V T P L S  
 401 L G I E T A G G V M T V L I K R N T T I P T K **QTQTFTT YSDNQPGLI QVYEGER** A M T  
 451 K D N N L L G K F E L T G I P P A P R G V P Q I E V T F D I D A N G I L N V S A V D K S T G K E N K  
 501 I T I T N D K G R L S K E D I E R M V Q E A E K Y K A E D E K Q R D K V S S K N S L E S Y A F N M K  
 551 A T V E D E K L Q G K I N D E D K Q K I L D K C N E I I S W L D K N Q T A E K E E F E H Q Q K E L E  
 601 K V C N P I I T K L Y Q S A G G M P G G M P G G F P G G G A P P S G G A S S G P T I E E V D

## A. MALDI-TOF MS spectrum (spot 5)



## B. Peptides detected by MALDI-TOF-MS

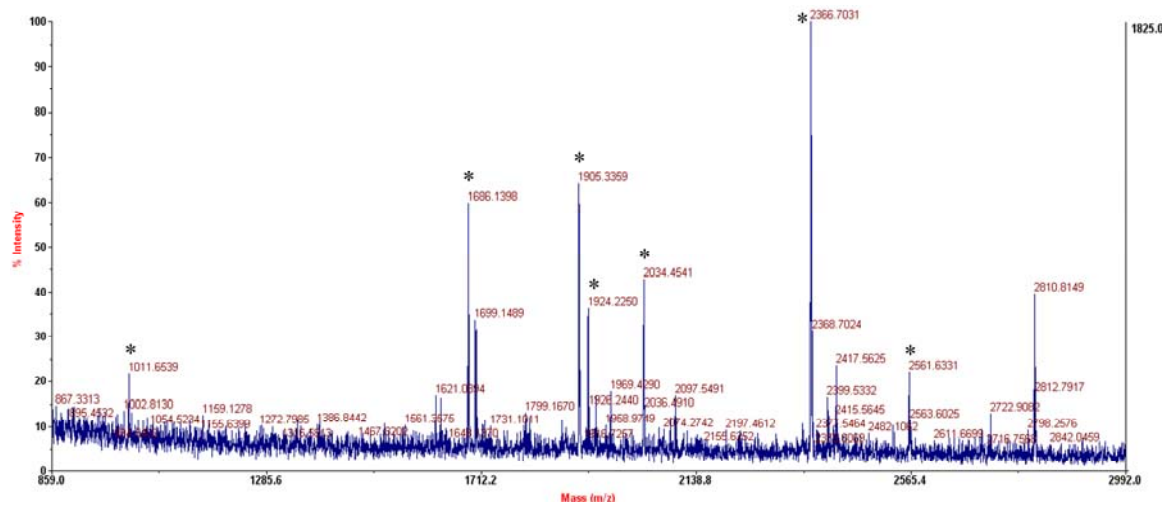
Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
1 - 19	MREIVHIQAGQCGNQIGAK	2109.9740	+
47 - 62	INVYYNEAAGNKYVPR	1870.8500	+
78 - 103	SGPFGQIFRPDNFVFGQSGAGNNWAK	2798.1530	+
104 - 121	GHYTEGAELVDSVLDVVR	1958.9080	+
217 - 241	LTTPTYGDLNHLVSATMSGVTTCLR	2708.1630	+
242 - 251	FPGQLNADLR	1130.5870	+
242 - 252	FPGQLNADLRK	1258.6740	+
253 - 262	LAVNMVPFPR	1143.6220	+
263 - 276	LHFFMPGFAPLTSR	1620.8000	+
263 - 276	LHFFMPGFAPLTSR	1636.7920	+
310 - 318	YLTVAAI FR	1053.5920	+
363 - 380	MSATFIGNSTAIQELFKR	2013.9550	+
381 - 390	ISEQFTAMFR	1229.6140	+

## C. Matched peptides (Bold Red) in the Tubulin amino acid sequence

**1 MREIVHIQAG QCGNQIGAK**F WEVISDEHGI DPTGSYHGDS DLQLER**INVY**  
**51 YNEAAGNKYV P**RAILVDLEP GTMDSVRS**GP FGQIFRPDNF VFGQSGAGNN**  
**101 WAKGHYTEGA ELVDSVLDVV R**KESESCDCL QGFQLTHSLG GGTGSGMGTL  
**151 LISKIREEYP DRIMNTFSVM PSPKVS**DTVV EPYNATLSVH QLVENTDETY  
**201 SIDNEALYDI CFRTLK**L**TTPT YGDLNHLVS ATMSGVTTCL R**F**P**G**Q**L**NADL**  
**251 R**K**LAVNMVPF PRLHFFMPGF A**PLTSRGSQQ YRALTVPELT QQMFD SKNMM  
**301 AACDPRHGR Y L**T**VAAIFR**GR MSMKEVDEQM LNVQNKNSSY FVEWIPNNVK  
**351 TAVCDIPPRG LK**M**SATFIGN S**T**AIQELFKR I**S**EQFTAMFR** RKAFLHWYTG  
**401 EGMDEMEFTE AESNMNDLVS EYQQYQ**DATA DEQGEFEEEE GEDEA



## A. MALDI-TOF MS spectrum (spot 6)



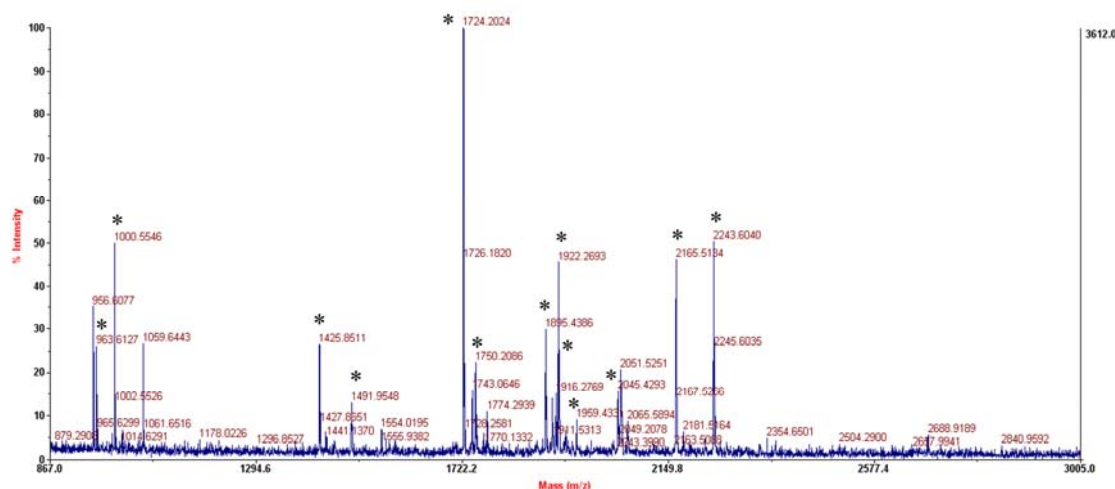
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	$[M+H]^+$	Matched
97 - 121	LVQDVANNTNEEAGDGTTTATVLAR	2560.6330	+
134 - 142	GANPVEIRR	1011.6500	+
206 - 221	TLNDELEIIEGPKFDR	1923.2330	+
206 - 221	TLNDELEIIEGPKFDR	1939.2330	+
250 - 268	KISSVQSIVPALEIANahr	2033.4540	+
251 - 268	ISSVQSIVPALEIANahr	1905.3260	+
269 - 290	KPLVIAEDVDGEALSTLVLNR	2365.7010	+
345 - 359	VGEVIVTKDDAMLLK	1631.1390	+
430 - 446	AAVEEGIVLGGGCALLR	1685.1500	+

## C. Matched peptides (Bold Red) in the HSP60 amino acid sequence

1 MLRLPTVLRQ MRPVSRALAP HLTRAYAKDV KFGADARALM LQGVDLLADA  
 51 VAVTMGPKGR TVIIEQSWGS PKVTKDGVTV AKSIDLKDKY KNIGAK**LVQD**  
 101 **VANNTNEEAG DGTTTATVLA** RSIKEGF EK ISK**GANPVEI** RRGVMLAVDA  
 151 VIAELKKQSK PVTTPPEEIAQ VATISANGDK DIGNIISDAM KKVGRKGVIT  
 201 VKDGK**TLNDE LEIIEGPKFD** RGYISPYFIN TSKGQKCEFQ DAYVLLSEK**K**  
 251 **ISSVQSIVPA LEIANahrKP LVIAEDVDG EALSTLVLNR** LKVGLQVVAV  
 301 KAPFGDNRK NQLKDMAIAT GGAVFGEEGL NLNLEDVQAH DLGK**VGEVIV**  
 351 **TKDDAMLLK** KGDKAHIEKR IQEITEQLDI TTSEYEKEKL NERLAKLSDG  
 401 VAVLKVGGTS DVEVNEKKDR VTDALNATRA **AVEEGIVLGG GCALLR**CIPA  
 451 LDSLKPANED QKIGIEIKR ALKIPAMTIA KNAGVEGSLI VEKILQSSSE  
 501 VGYDAMLGDF VNMVEKGIID PTKVVRTALL DAAGVASLLT TAEAVVTEIP  
 551 KEEKDPGMGA MGGMGGGMGG GMF

## A. MALDI-TOF MS spectrum (spot 7)



## B. Peptides detected by MALDI-TOF-MS

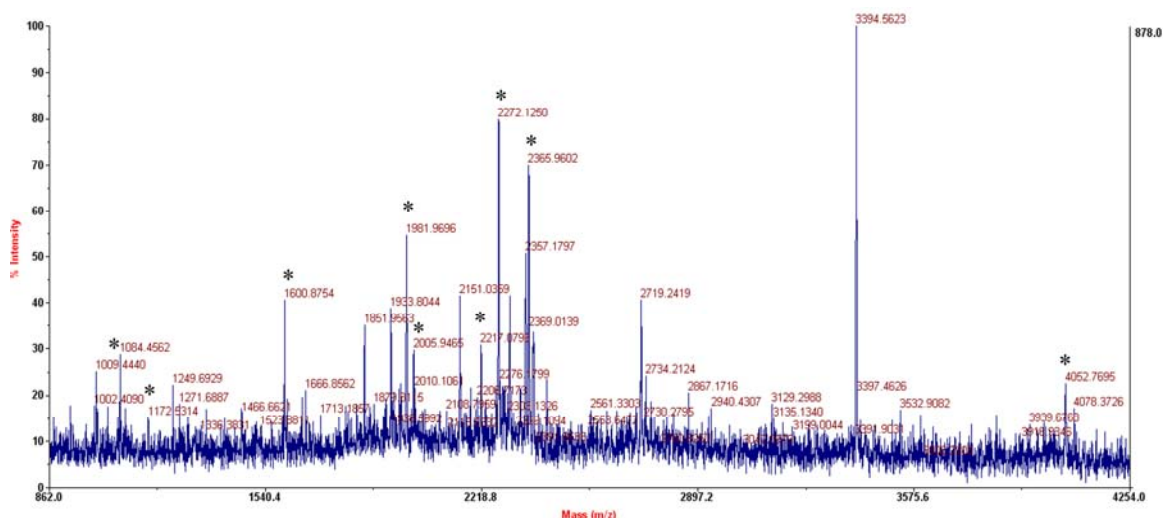
Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
69-76	MVEGFFDR	1000.5540	+
108 - 123	IKPCNHVLSLSPFIR	1894.4380	+
125 - 136	DDGSWEVIEGYR	1425.8600	+
137 - 143	AQHSQHR	863.4720	+
212 - 231	KGFIGPGIDVPAPDMSTGER	2044.4190	+
213 - 231	GFIGPGIDVPAPDMSTGER	1916.2980	+
303 - 318	TFVVQGFQNVGLHSMR	1749.2120	+
347 - 363	ELEDFKLQHGSI LGFPK	1958.3770	+
400 - 420	IIAEGANGPTTPEADKIFLER	2242.5740	+
445 - 453	NLNHVS YGR	1059.6440	+
454 - 460	LTFKYER	956.6030	+
461 - 476	DSNYHLLMSVQESLER	1921.2680	+
481 - 496	HGGTIPVVPTAEFQDR	1724.1860	+
497 - 516	ISGASEKDIVHSGLAYTMER	2164.4730	+
504 - 516	DIVHSGLAYTMER	1491.9690	+
528 - 535	YNLGLDLR	963.6170	+

## C. Matched peptides (Bold) in the GDH amino acid sequence

1 MYRRLGEVLL LSRAGPAALG SAAADSAALL GWARGQPSAV PQPGLTPVAR  
 51 RHYSEAATDR EDDPNFFK**MV EGGFFDR**GASI VEDKLVEDLK TRENEEQKRN  
 101 RVRGILR**IK PCNHVLSLSF PIRRDDGSWE VIEGYRAQHS QHR**TPCKGGI  
 151 RYSTDVSVDE VKALASLMTY KCAVVDVDPFG GAKAGVKINP KNYTDNELEK  
 201 ITRRFTMELA **KKGFIGPGID VPAPDMSTGE REMSWIADTY ASTIGHYDIN**  
 251 **AHACVTGKPI SQGGIHGRIS** ATGRGVFHGI ENFINEASYM SILGMTPGLG  
 301 DK**TFVVQGFQ NVGLHSMRYL** HRFGAKCVGV GESDGSIWNP DGIDPK**ELED**  
 351 **FKLQHGSI LG FPKAKVYEGS ILEADCILI PAASEKQLTK** SNAPRVKAKI

**401 IAEGANGPTT PEADKIFLER NIMVIPDLYL NAGGVTVSYF EWLKLNHVS**  
**451 YGRLTFKYER DSNYHLLMSV QESLERKFGK HGGTIPVVPT AEFQDRISGA**  
**501 SEKDIVHSGL AYTHERSARQ IMRTAMKYNL GLDLRTAAYV NAIEKVKVY**  
**551 NEAGVTFT**

## A. MALDI-TOF MS spectrum (spot 8)



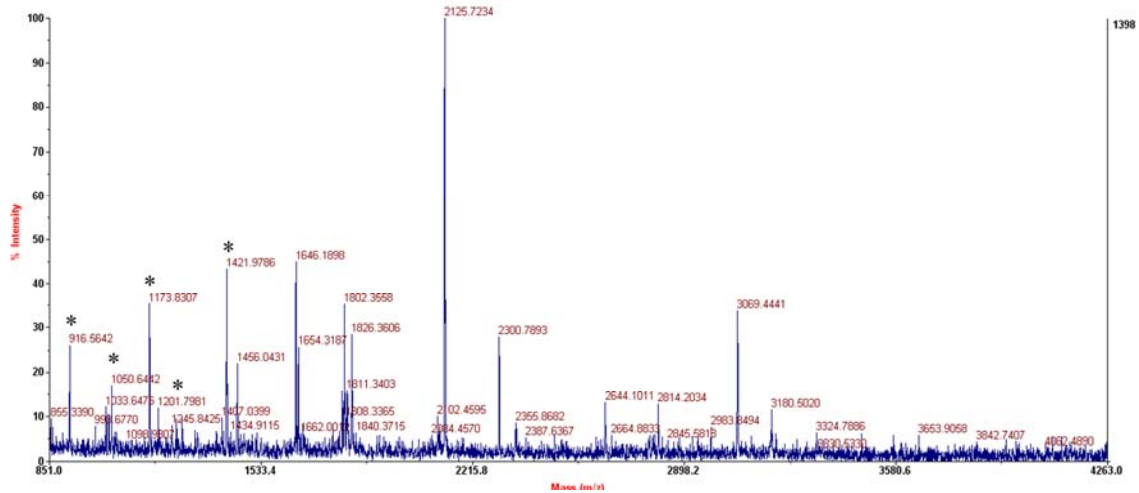
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
83 - 97	ASLQNLLSASQAQLR	1599.8770	+
106-142	AFTSQASATMHLPATIGDYTDFYSSLQHATNVGIMFR	4049.7500	+
143-162	GKENALLPNWLHLPVGYHGR	2271.2040	+
163-174	ASSVVVSGTPIR	1172.5610	+
175-194	RPMGQMRPDNSKPPVYGASK	2216.0580	+
195-211	RLDMELEMAFFVGPNGR	1981.9410	+
221-237	AQEHIFGMVLMNDWSAR	2004.9210	+
372-381	AIDVGQQQTR	1044.4740	+
382-402	TFLLDGDEVIITGHCQGDGYR	2366.0740	+

## C. Matched peptides (Bold Red) in the Fumarylacetoacetase amino acid sequence

1 MSFIPVAEDS DFPIQNLPGY VFSTQSNPKP RIGVAIGDQI LDLSVIKHLF  
 51 TGPVLSKHQH VFDETTLSNF MGLGQAAWKE AR**ASLQNLLS ASQAQLR**DDK  
 101 ELRQ**AFTSQ ASATMHLPAT IGDYTDFYSS LQHATNVGIM FR**GKENALLP  
 151 **NWLHLPVGYH GRASSVVVSG TPIRRPMGQM RPDNSKPPVY GASK**RLDMEL  
 201 **EMAFFVGPNG R**FGEPISK **AQEHIFGMVL MNDWSAR**DIQ QWEYVPLGPF  
 251 LGKSF GTTIS PWVVPMDALM PFVVPNPKQD PKPLPYLCHS QPYTFDINLS  
 301 VALKGE GMSQ AATICRSNFK HMYWTILQQL THHSVNGCNL RPDLLASGT  
 351 ISGSDPESFG SMLLELSWKGT K**AIDVGQQQT RTFLLDGDEV IITGHCQGDG**  
 401 **YR**VGFGQCAG KVLPA LSPA

## A. MALDI-TOF MS spectrum (spot 9)



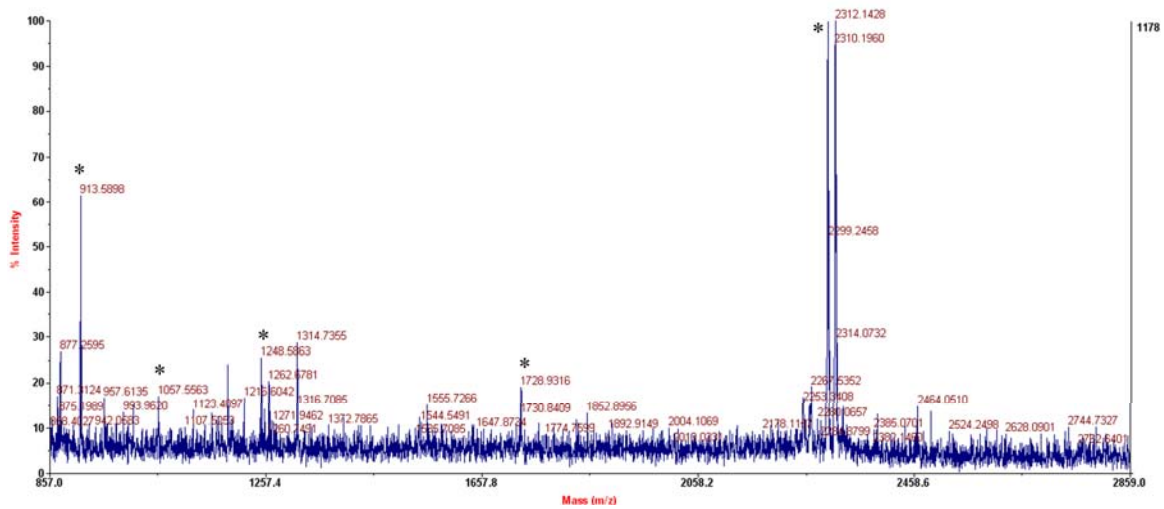
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
15-22	ELSDIALR	916.5810	+
61-69	QVLFSADDR	1050.6480	+
61-71	QVLFSADDRVK	1277.9280	+
102-111	GILVGIKVDK	1041.7720	+
305-315	ALQASALSAWR	1173.8340	+
319-331	DNAGAATEEFIKR	1421.9770	+
331-342	RAEMNGLAAQ GK	1245.8630	+

## C. Matched peptides (Bold Red) in the Fructose-bisphosphate aldolase C amino acid sequence

1 MPHSYPALSA EQK**ELSDIA LR**IVAPGKGI LAADESVGSM AKRLSQIGVE  
 51 NTEENRRLYR **QVLFSADDRV** KKCIGGVIFF HETLYQKDDN GVPFVRTIQE  
 101 **KGILVGIKVD** KGVVPLAGTD GETTTQGLDG LLERCAQYKK DGADFAKWRC  
 151 VLKISDRTPS ALAILENANV LARYASICQQ NGIVPIVEPE ILPDGDHDLK  
 201 RCQFVTEKVL AAVYKALSDH HVYLEGTLK PNMVTPGHAC PIKYSPEEIA  
 251 MATVTALRRT VPPAVPGVTF LSGGQSEEEA SLNLNAINRC SLPRPWALTF  
 301 SYGR**ALQASA LSAWR**QQRDN **AGAATEEFIK RAEMNGLAAQ GK**YEGSGDGG  
 351 AAAQSLYVAN HAY

## A. MALDI-TOF MS spectrum (spot10)



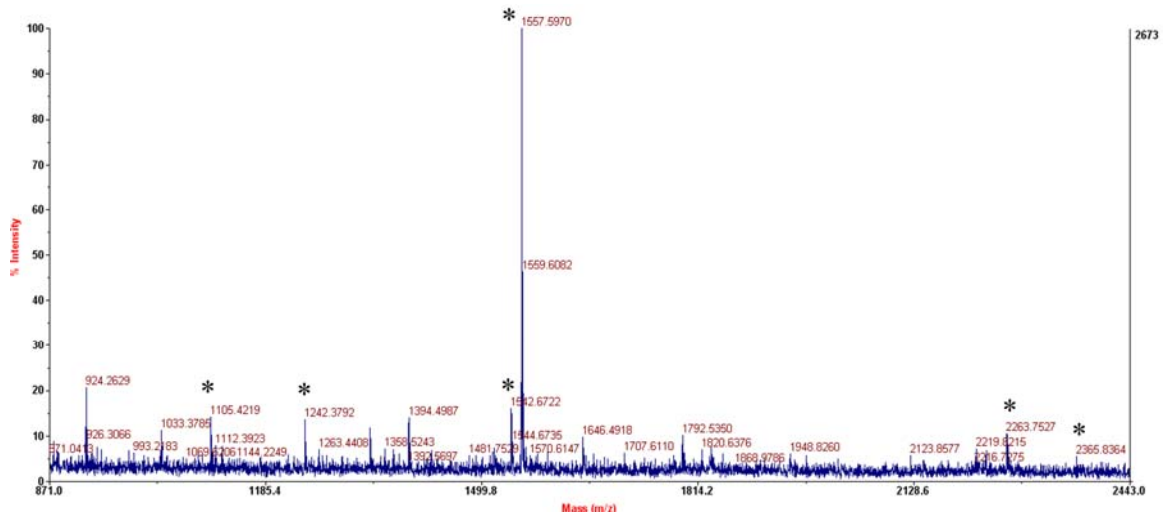
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	$[M+H]^+$	Matched
92-100	IVVVTAGVR	913.5910	+
92-107	IVVVTAGVRQEGESR	1727.8920	+
159-170	VIGSGCNLDSAR	1248.5780	+
171-178	FRYLMAEK	1057.5650	+
280-299	GMYGIENEVFLSLPCILNAR	2296.1350	+
309-318	LKDDEVAQLR	1186.6320	+

## C. Matched peptides (Bold Red) in the LDH amino acid sequence

1 MATLKEKLIAPVADDETAVPNNKITVVGVGQVGMACAISILGKSLADELA  
 51 LVDVLEDKLGEMMDLQHGS LFLQTPKIVA DKDYSVTANS **KIVVVTAGVR**  
 101 **QEGESR**LNLVQRNVNFKF IIPQIVKYSPTCTIIVVSNPVDILTYVTWK  
 151 LSGLPKHR**VI GSGCNLDSAR FRYLMAEKL**GIHPSSCHGWI LGEHGDSSVA  
 201 VWSGVNVAGVSLQELNPEMGTDNDSENWKEVHKMVDSDAYEVIKLKGYTN  
 251 WAIGLSVADLIESMLKNLSR IHPVSTMVKG **MYGIENEVFL SLPCILNARG**  
 301 LTSVINQ**LK DDEVAQLR**KSADTLWDIQDKDLKDL

## A. MALDI-TOF MS spectrum (spot 11)



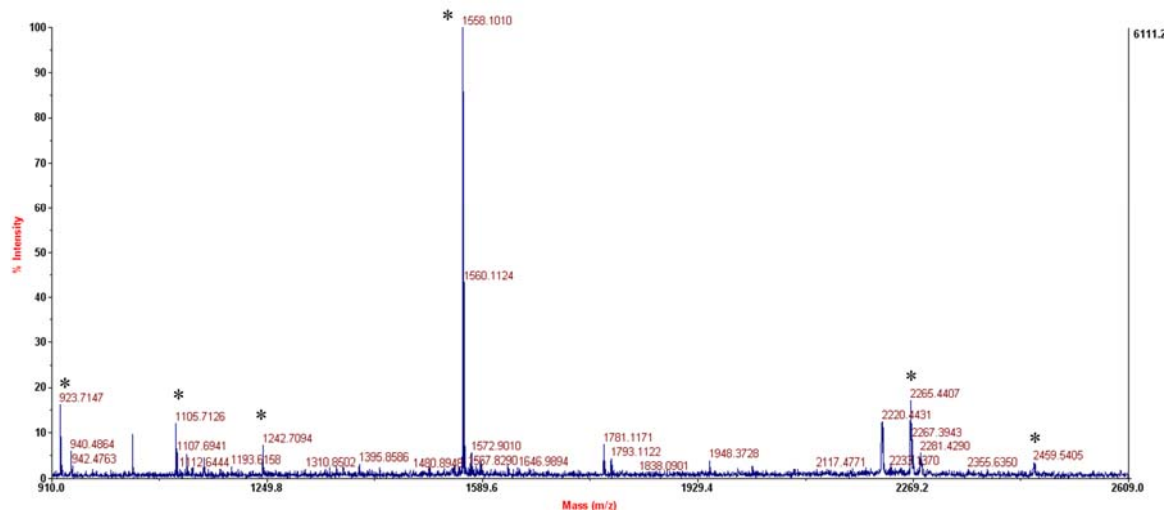
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
70-78	RQDLFIVSK	1105.4340	+
156-169	AIGVSNFNPLQIER	1557.5990	+
244-256	TTAQVLIRFPIQR	1542.6660	+
276-294	FRYLMAEK	2263.7400	+
280-299	VDFFELSNEDMATLLSYNR	2296.1350	+
307-316	HKDYPFHAEV	1242.3780	+

## C. Matched peptides (Bold Red) in the AR amino acid sequence

1 MASHLELNNG TKMPTLGLGT WKSPPGQVTE AVKVAIDMGY RHIDCAQVYQ  
51 NEKEVGVALQ EKLKEQVVKR **QDLFIVSKLW** CTFHDQSMVK GACQKTLSDL  
101 QLDYLDLYLI HWPTGFKPGP DYFPLDASGN VIPSDTDFVD TWTAMEQLVD  
151 EGLVK**AIGVS NFNPLQIERI** LNKPGLKYKP AVNQIECHPY LTQEKLIEYC  
201 HCKGIVVTAY SPLGSPDRPW AKPEDPSLLE DPRIKEIAAK YNK**TTAQVLI**  
251 **RFPIQR**NLVV IPKSVTPARI AENFK**VDFE LS**NEDMATLL **SYNR**NWRVCA  
301 LMSCAK**HKDY PFHAEV**

## A. MALDI-TOF MS spectrum (spot 12)



## B. Peptides detected by MALDI-TOF-MS

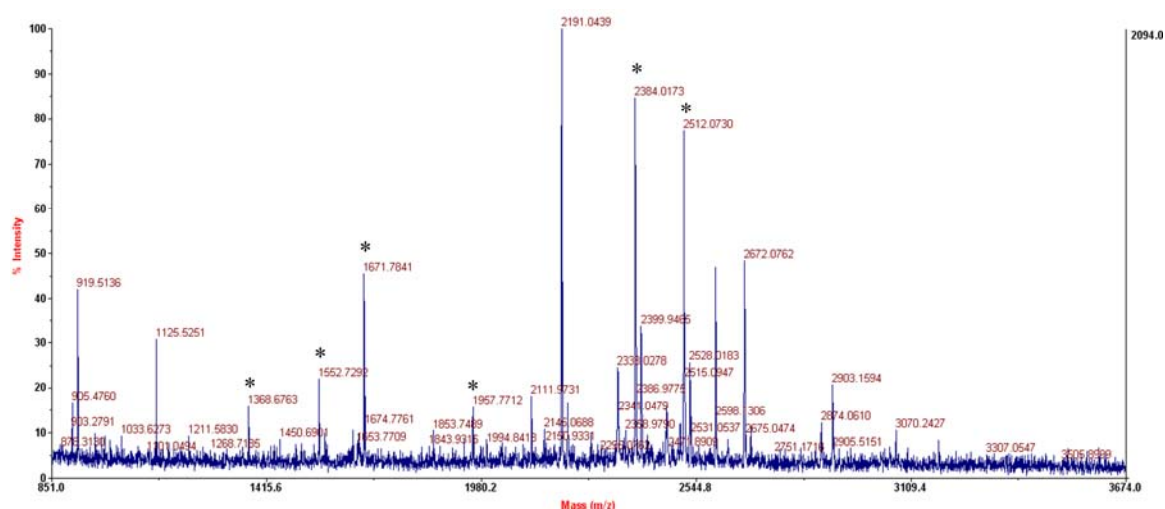
Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
34-41	VAIDMGYR	924.4990	+
42-62	HIDCAQVYQNEKEVGVALQEK	2458.5160	+
70-78	RQDLFIVSK	1105.7080	+
156-169	AIGVSNFNPLQIER	1558.0120	+
196-203	LIEYCHCK	1122.5820	+
244-251	TTAQVLIR	901.5900	+
276-294	VDFE LSNEDMATLLSYNR	2264.3420	+
307-316	HKDY PFHAEV	1242.7110	+

## C. Matched peptides (Bold Red) in the AR amino acid sequence

1 MASHLELNNG TKMPTLGLGT WKSPPGQVTE AVK**VAIDMGY RHIDCAQVYQ**  
 51 **NEKEVGVALQ EKL**KEQVVKR **QDLFIVSK**LW CTFHDQSMVK GACQKTLSDL  
 101 QLDYLDLYLI HWPTGFKPGP DYFPLDASGN VIPSDTDFVD TWTAMEQLVD  
 151 EGLVK**AIGVS NFNPLQIER**I LNKPGLKYKP AVNQIECHPY LTQE**KLIEYC**  
 201 **HCK**GIVVTAY SPLGSPDRPW AKPEDPSLLE DPRIKEIAAK YNK**TTAQVLI**  
 251 **RFPIQR**NLVV IPKSVTPARI AENFK**VDFE LSNEDMATLL SYN**RNWRVCA  
 301 LMSCAK**HKDY PFHAEV**



## A. MALDI-TOF MS spectrum (spot 13)



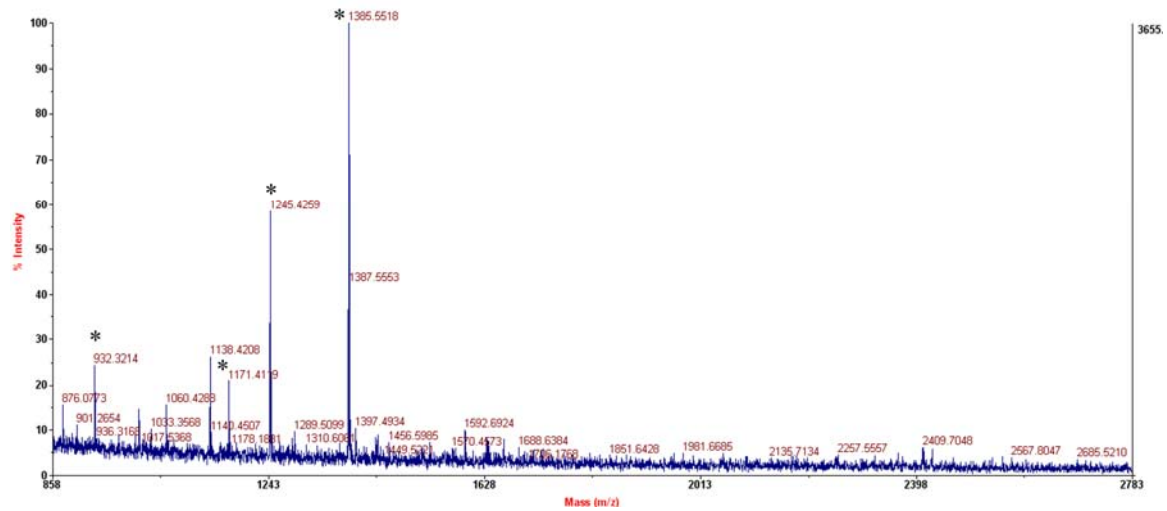
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
9-16	RVLVYGGR	924.4990	+
53-70	MTDSFTEQADQVTAEVGK	1956.7540	+
136-151	AALDGTPGMIGYMAK	1552.7290	+
152-164	GAVHQLCQSLAGK	1368.6720	+
165-188	NSGMPSGAAAIAVLPVTLDTPMNR	2382.9970	+
165-189	NSGMPSGAAAIAVLPVTLDTPMNRK	2511.0690	+
218-233	RPNSGSLIQVVTTDGK	1671.8010	+

## C. Matched peptides (Bold Red) in the DHPR amino acid sequence

1 MAASGEAR**RV LVYGG**R GALG SRCVQAFRR NWWVASIDVV ENEEASASVI  
 51 VK**MTDSFTEQ ADQVTAEVGK** LLGDQKVDAL LCVAGGWAGG NAKSKSLFKN  
 101 CDLMWKQSIW TSTISSHLAT KHLKEGGLLT LAGAK**AALDG TPGMIGYMA**  
 151 **KGAVHQLCQS LAGKNSGMPS GAAAIAVLPV TLDTPMNRKS** MPEADFSSWT  
 201 PLEFLVETFH DWITGNK**RPN SGSLIQVTT DGK**TELTPAY F

## A. MALDI-TOF MS spectrum (spot 14)



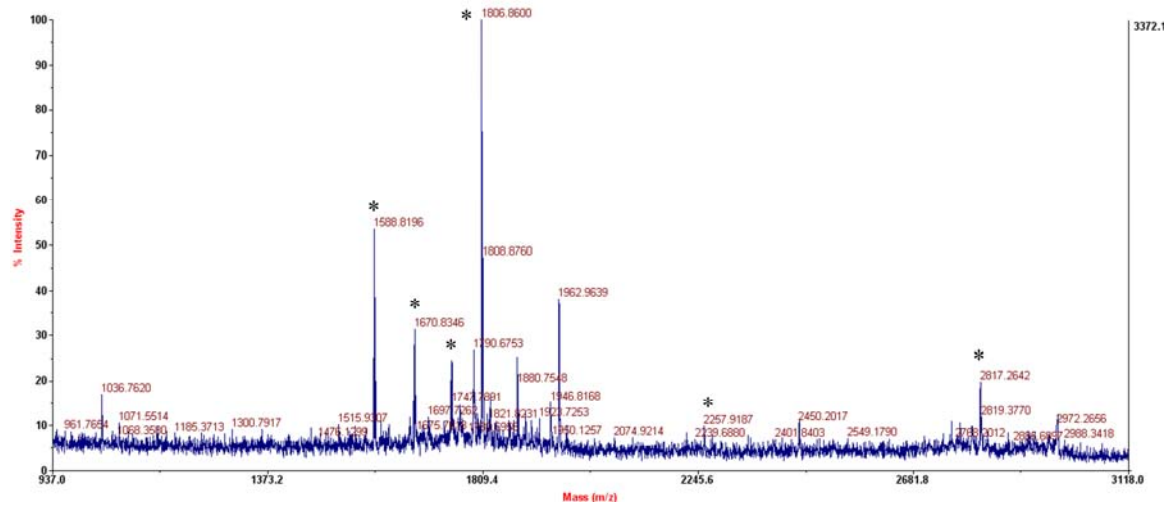
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	$[M+H]^+$	Matched
2-13	PGKPVLYFDGR	1385.6230	+
130-138	NRYFPAFEK	1171.5620	+
142-152	SHGQDYLVGNR	1245.5900	+
142-155	SHGQDYLVGNRLSR	1601.6710	+
197-204	FLQPGSQR	932.4410	+

## C. Matched peptides (Bold Red) in the GSTA3 amino acid sequence

**1** **MPGKPVLYHYFDGR**GRMEPIR WLLAAAGVEF EEQFLKTRDD LARLRNDGSL  
**51** MFQQVPMVEI DGMKLVQTRA ILNYIATKYN LYGKDMKERA LIDMYAEGVA  
**101** DLDEIVLHYP YIPPEGEKEAS LAKIKDKARN **RYFPAFEKVL** K**SHGQDYLVG**  
**151** **NRLSR**ADVYL VQVLYHVEEL DPSALANFPL LKALRTRVSN LPTVKK**FLQP**  
**201** **GSQR**KPLEDE KCVESAVKIF S

## A. MALDI-TOF MS spectrum (spot 15)



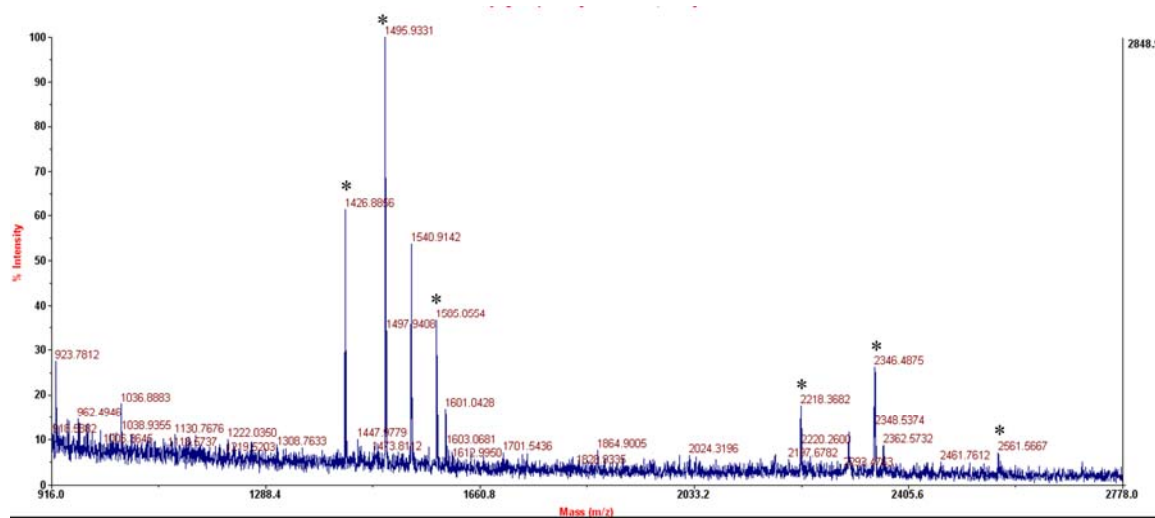
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
32-45	MLQLVEESKDAGIR	1588.8210	+
46-59	TLVMLDEQGEQLER	1660.8090	+
104-119	AWGNNQDGVVASQPAR	1669.7700	+
120-135	VVDEREQMAISGGFIR	1806.8720	+
137-161	VTNDARENEMDENLEQVSGIIGNLR	2816.2520	+
162-176	HMALDMGNEIDTQNR	1744.7850	
162-180	HMALDMGNEIDTQNRQIDR	2256.9290	

## C. Matched peptides (Bold Red) in the SNP25 amino acid sequence

1 MAEDADMRNE LEEMQRRADQ LADESLESTR **RMLQLVEESK DAGIRTLVML**  
**51 DEQGEQLERI** EEGMDQINKD MKEAEKNLTD LGKFCGLCVC PCNKLKSSDA  
**101 YKKA****WGNNQD GVVASQPARV** **VDEREQMAIS GGFIR****VTND ARENEMDENL**  
**151 EQVSGIIGNL** **RHMALDMGNE IDTQNRQIDR** IMEKADS NKT RIDEANQRAT  
**201 KMLGSG**

## A. MALDI-TOF MS spectrum (spot 16)



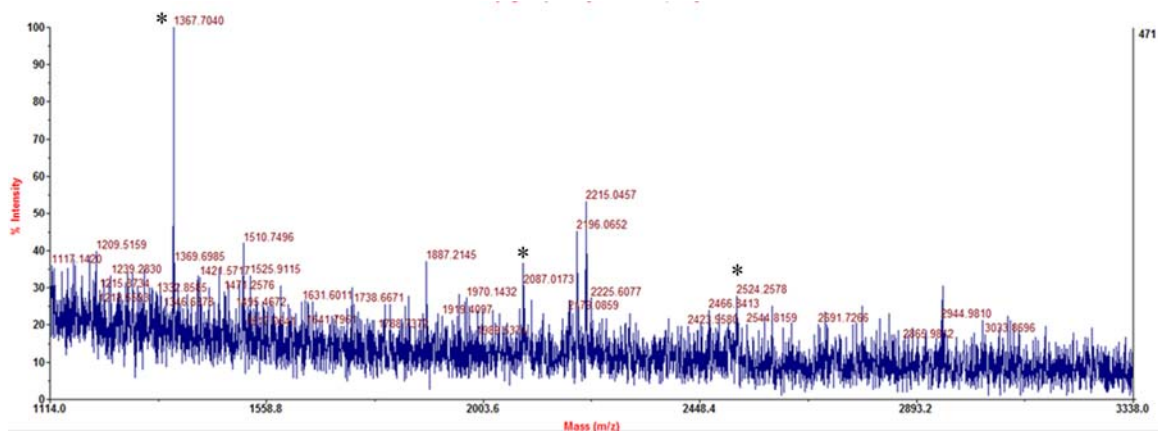
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
32-44	YGYTHLSTGDLLR	1495.9390	+
64 -77	GELVPLETVLDMLR	1585.0450	+
108-128	KIAQPTLLLYVDAGPETMTQR	2345.4940	+
109-128	IAQPTLLLYVDAGPETMTQR	2217.3710	+
156-167	ATEPVISFYDKR	1425.8930	+
172-194	KVNAEGSVDTVFSQVCTYLDLKL	2560.5700	+

## C. Matched peptides (Bold) in the AK amino acid sequence

1 MEDKLLKAKI IFVVGPGSG KGTQCEKIVQ **KYGYTHLSTG DLLRAEVSSG**  
 51 SSRGKMLSSI MEK**GELVPLE TVLDMLR**DAM LAKVDSSNGF LIDGYPREVK  
 101 QGEEFER**KIA QPTLLLYVDA GPETMTQR**LL KRGETSGRVD DNEETIKKRL  
 151 ETTYK**ATEPV ISFYDKR**GIV **RKVNAEGSVD TVFSQVCTYL DSLK**

## A. MALDI-TOF MS spectrum (spot 17)



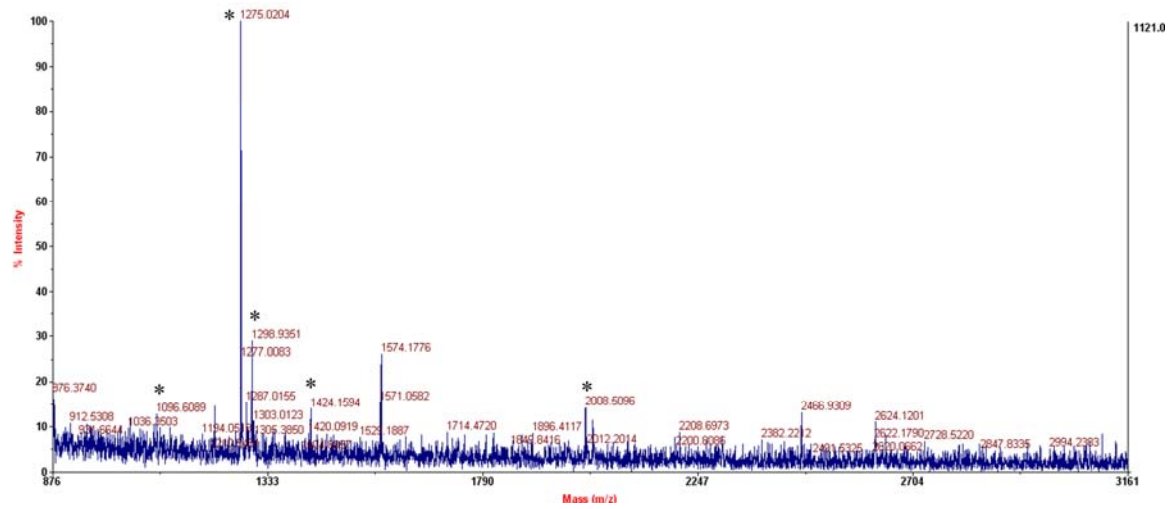
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
72-92	HGGPADEERHVGDLGNVAAGK	2085.9560	+
93-116	DGVANVSIEDRVISLSGEHSIIGR	2523.1270	+
104-116	VISLSGEHSIIGR	1367.7090	+

## C. Matched peptides (Bold) in the SOD amino acid sequence

1 MAMKAVCVLK GDGPVQGVIIH FEQKASGEPV VVSGQITGLT EGEHGFHVHQ  
51 YGDNTQGCTT AGPHFNPHSK **KHGGPADEER HVGDLGNVAA GKDGVANVSI**  
101 **EDRVISLSGE HSIIGR**TMVV HEKQDDLKGG GNEESTKTGN AGSRLACGVI  
151 GIAQ

## A. MALDI-TOF MS spectrum (spot 18)



## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
19-31	VNPDDVGGEALGR	1298.9430	+
32-41	LLVVYPWTQR	1275.0190	+
42-60	YFDSFGDLSSASAIMGNPK	2007.5030	+
68 -77	VINAFNDGLK	1090.8120	
134-147	VVAGVASALAHKYH	1423.1460	

## C. Matched peptides (Bold Red) in the Hemoglobin subunit beta-1 amino acid sequence

1 MVHLTDAEKA AVNGLWGK**VN PDDVGGEALG RLLVVYPWTQ RYFDSFGDLS**  
**51 SASAIMGNPK** VKAHGKK**VIN AFNDGLKHLD NLK**GTFAHLS ELHCDKLHVD  
101 PENFRLNGM IVIVLGHHLG KEFTPCAQAA FQK**VVAGVAS ALAHKYH**

## Supplementary Information for

### Proteomic identification of an Upregulated Isoform of Annexin A3 in the Spinal Cords of Rats in a Neuropathic Pain Model

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Changsheng Huang<sup>1</sup>, Maoyu Li<sup>2</sup>, Xianquan Zhan<sup>2,3</sup>, Qulian Guo<sup>1\*</sup>

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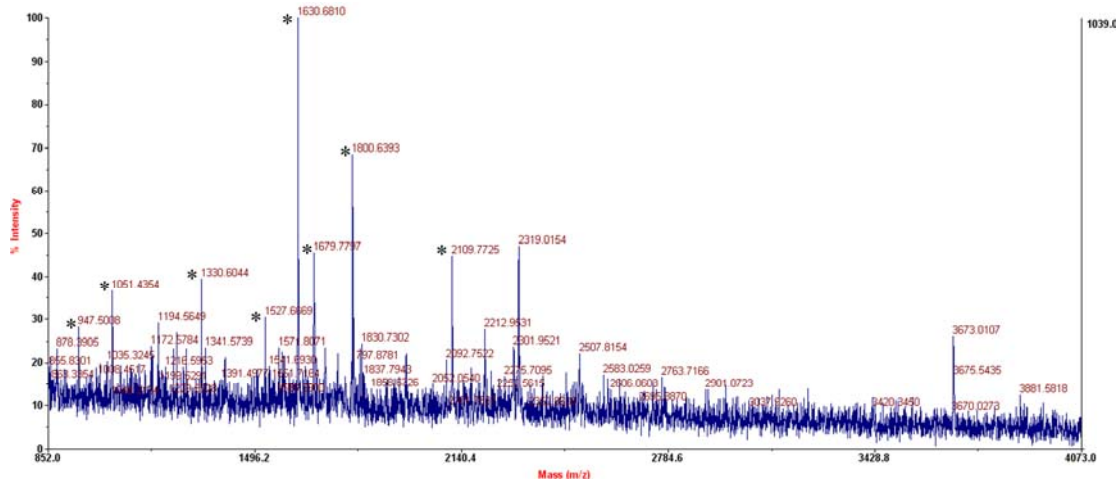
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E-mail: [wangyuanzou@csu.edu.cn](mailto:wangyuanzou@csu.edu.cn) or [qulianguo@hotmail.com](mailto:qulianguo@hotmail.com)

## A. MALDI-TOF MS spectrum (spot 1)



## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
46-53	MDELQLFR	1051.4330	+
46 - 60	MDELQLFRGDTVLLK	1777.7970	+
66 - 83	EAVCIVLSDDTCSDEKIR	2109.7740	+
148 - 155	KGDIFLVR	947.4930	+
324 - 338	IVSQLLTLMDGLKQR	1714.8550	+
454 - 465	WALSQSNPSALR	1329.6130	+
600 - 614	VINQILTEMDGMSTK	1679.7840	+
754 - 766	KYEMFAQTLQQSR	1629.6840	+
755 - 766	YEMFAQTLQQSR	1501.6090	+

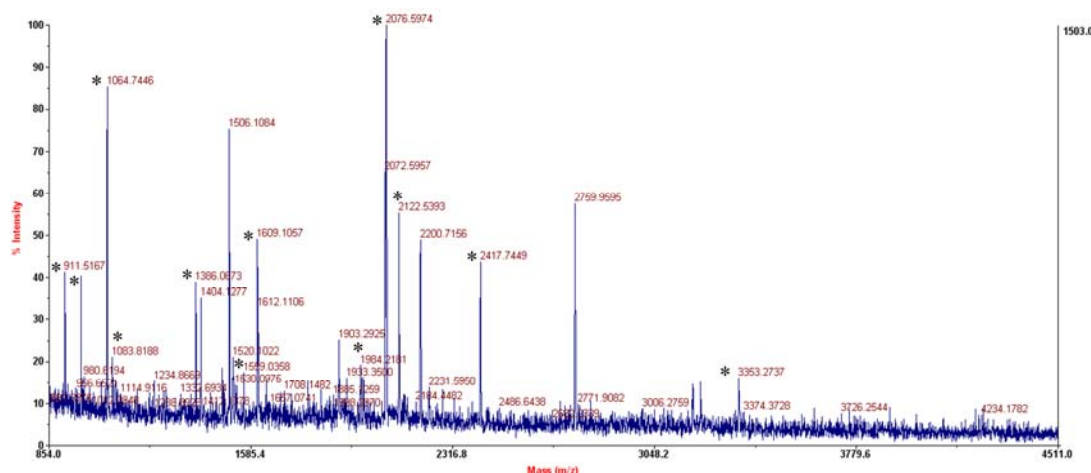
## C. Matched peptides (Bold Red) in the TERA amino acid sequence

1 MASGADSKGD DLSTAILKQK NRPNRLIVDE AINEDNSVVS LSQPK**MDELQ**  
**51 LFRGDTVLLK** GKRR**EAVCI VLSDDTCSDE KIR**MNRVVRN NLRVRLGDVI  
101 SIQPCPDVKY GKRIHVLPID DTVEGITGNL FEVYLKPYFL EAYRPIR**KGD**  
**151 IFLVR**GGMRA VEFKVVETDP SPYCIVAPDT VIHCEGEPIK REDEEESLNE  
201 VGYDDIGGCR KQLAQIKEMV ELPLRHPALF KAIGVKPPRG ILLYGPPGTG  
251 KTLIARAVAN ETGAFFFLIN GPEIMSKLAG ESESNLRKAF EEAENAPAI  
301 IFIDELDAIA PKREKTHGEV ERR**IVSQLLT LMDGLKQR**AH VIVMAATNRP  
351 NSIDPALRRF GRFDREVDIG IPDATGRLEI LQIHTKNMKL ADDVDLEQVA  
401 NETHGHVGAD LAALCSEAAL QAIRKKMDLI DLEDETIDAE VMNSLAVTMD  
451 DFR**WALSQSN PSALR**ETVVE VPQVTWEDIG GLEDVKRELQ ELVQYPVEHP  
501 DKFLKFGMTP SKGVLFYGP GCGKTLLAKA IANECQANFI SIKGPELLTM  
551 WGESEANVR EIFDKARQAA PCVLFFDEL DSIKARGGNI GDGGGAADR**V**  
**601 INQILTEMDG MSTK**KNVFI GATNRPDIID PAILRPGRLD QLIYIPLPDE  
651 KSRVAILKAN LRKSPVAKDV DLEFLAKMTN GFSGADLTEI CQRACKLAIR  
701 ESIESEIRRE RERQTNPSAM EVEEDDPVPE IRRDHFEEM RFARRSVSDN



751 DIR**KYEMFAQ TLQSR**GFGS FRFPSGNQGG AGPSQGSGGG TGGNVYTEDN  
801 DDDLYG

## A. MALDI-TOF MS spectrum (spot 2)



## B. Peptides detected by MALDI-TOF-MS

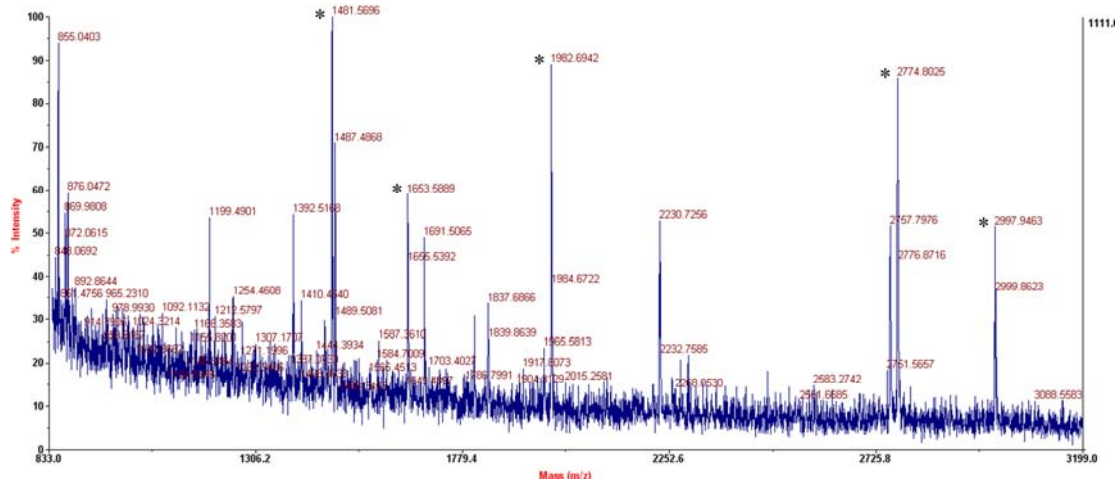
Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
63 - 68	FCYHER	911.5130	+
185 - 200	FASEIAGVDDLGGTTGR	1609.1020	+
247 - 266	KTESIDVMDAVGSNIVVSTR	2121.4770	+
248 - 266	TESIDVMDAVGSNIVVSTR	1993.3830	+
292 - 299	FAYDGLKR	969.6620	+
409 - 417	FEAPLNFAR	1064.7480	+
429 - 450	VALIGSPVDLTYRYDHLGDSPK	2416.7160	+
451 - 464	ILQDIASGNHEFSK	1559.0540	+
465 - 483	VLNAAKPMVVLGSSALQR	1982.3960	+
471 - 483	KPMVVLGSSALQR	1386.0600	+
519 - 538	IASQVAALDLGYKPGVEAIR	2071.5630	+
563 - 592	DCFIVYQGHGVDVGAPIADVILPGAAYTEK	3214.0580	+
646 - 655	LGEVSPNLVR	1083.8080	+
646 - 673	LGEVSPNLVRYDDVEEANYFQQASELAK	3185.0730	+
674 - 702	LVDQEFLADPLVPPQLTIKDFYMTDSISR	3352.2110	+

## C. Matched peptides (Bold Red) in the NADH amino acid sequence

**1** MLRIPVKRAL IGLSKSPKGY VRSTGTAASN LIEVFVDGQS VMVEPGTTVL  
**51** QACEKVMQI PR**FCYHER**LS VAGNCRMCLV EIEKAPKVVA ACAMPVMKGW  
**101** NILTNSEKSK KAREGVMEFL LANHPLDCPI CDQGGECDLQ DQSMFSGSDR  
**151** SRFLEGKRAV EDKNIGPLVK TIMTRCIQCT RCIR**FASEIA GVDDLGGTTGR**  
**201** GNDMQVGTYI EKMFMSELSE NIIDICPVGA LTSKPYAFTA RPWETR**KTES**  
**251** **IDVMDAVGSN IVVSTR**TGEV MRILPRMHED INEEWISDKT **RFAVDGLKRQ**  
**301** RLTEPMVRNE **KGLLTYTSWE DALSRVAGML QSFEGK**AVAA IAGGLVDAEA  
**351** LVALKDLLNK VSDTLCTEE IFPNAGTD LRSNYLLNTT IAGVEEADV  
**401** LLVGTNPR**FE APLNFAR**IRK SWLHNDLK**VA LIGSPVDLTY RYDHLGDSPK**

451 **ILQDIASGNH EFSKVLNAAK KPMVVLGSSA LQR**DDGAAIL AAVSSIAQKI  
501 RVASGAAAEW KVMNILHRIA **SQVAALDLGY KPGVEAIR**KN PPKLLFLLGA  
551 DGGCITRQDL PK**DCFIVYQG HHGDVGAPIA DVILPGAAYT E**KSATYVNTE  
601 GRAQQTKVAV TPPGLAREDW KIIRALSEIA GITLPYDTLD QVRN**RLGEVS**  
651 **PNLVRYDDVE EANYFQQASE LAKLVDQEFL ADPLVPPQLT IKDFYMTDSI**  
701 **SR**ASQTMAKC VKAVTEGAQA VEEPSIC

## A. MALDI-TOF MS spectrum (spot3)



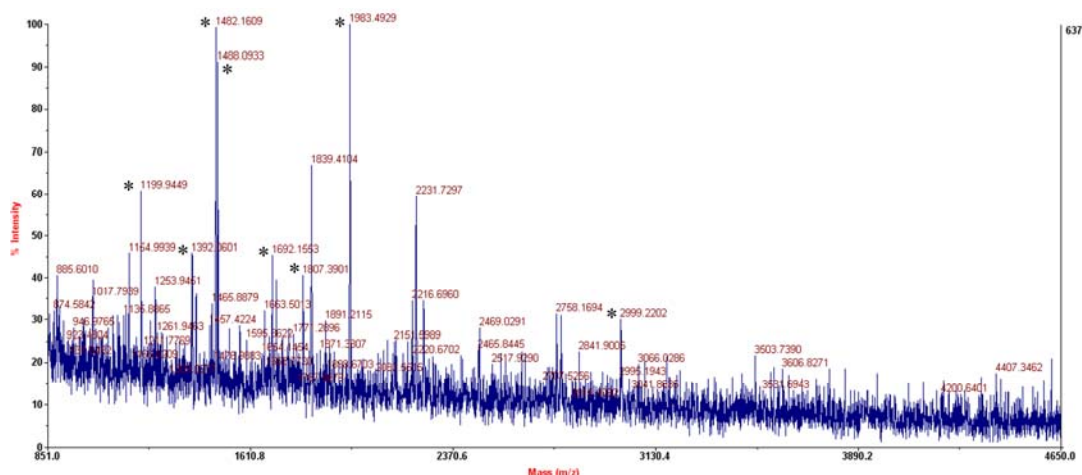
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
4 - 25	GPAVGIDLGTTYSCVGVFQHGK	2262.6820	+
57 - 72	NQVAMNPTNTVFDAGR	1805.5470	+
89 - 102	HWPFMVVNDAGRPK	1653.5380	+
138 - 155	TVTNAVVTVPAYFNDSQR	1981.6220	+
273 - 299	TLSSSTQASIEIDSLYEGIDFYTSITR	2996.9690	+
300 - 311	ARFEELNADLFR	1480.4660	+
424 - 447	QTQTFTTYSNQPGLIQVYEGER	2773.8670	+

## C. Matched peptides (Bold Red) in the HSC70 amino acid sequence

1 MSK**GPAVGID LGTTYSCVGV FQHGK**VEIIA NDQGNRTTPS YVAFTDTERL  
 51 IGDAAK**NQVA MNPTNTVFDA KRLIGRRFDD** AVVQSDMK**HW PFMVVNDAGR**  
 101 **PKVQVEYKGE** TKSFYPEEVS SMVLTKMKEI AEAYLGK**TVT NAVVTVPAYF**  
 151 **NDSQR**QATKD AGTIAGLNVL RIINEPTAAA IAYGLDKKVG AERNVLIFDL  
 201 GGGTFDVSIL TIEDGIFEVK STAGDTHLGG EDFDNRMVNH FIAEFKRKHK  
 251 KDISENKRAV RRLRTACERA KR**TLSSSTQA SIEIDSLYEG IDFYTSITRA**  
 301 **RFEELNADLF R**GTLDPVEKA LRDAKLDKSQ IHDIVLVGGS TRIPKIQKLL  
 351 QDFPNGKELN KSINPDEAVA YGAAVQAAIL SGDKSENVQD LLLLDVTPLS  
 401 LGIETAGGVM TVLIKRNTTI PTK**QTQTFTT YSDNQPGLI QVYEGER**AMT  
 451 KDNLLGKFE LTGIPPAPRG VPQIEVTFDI DANGILNVSA VDKSTGKENK  
 501 ITITNDKGRL SKEDIERMVQ EAEKYKAEDE KQRDKVSSKN SLESYAFNMK  
 551 ATVEDEKLQG KINDEDKQKI LDKCNEIISW LDKNQTAEKE EFEHQKKELE  
 601 KVCNPIITKL YQSAGGMPGG MPGGFPGGA PPSGGASSGP TIEEVD

## A. MALDI-TOF MS spectrum (spot 4)



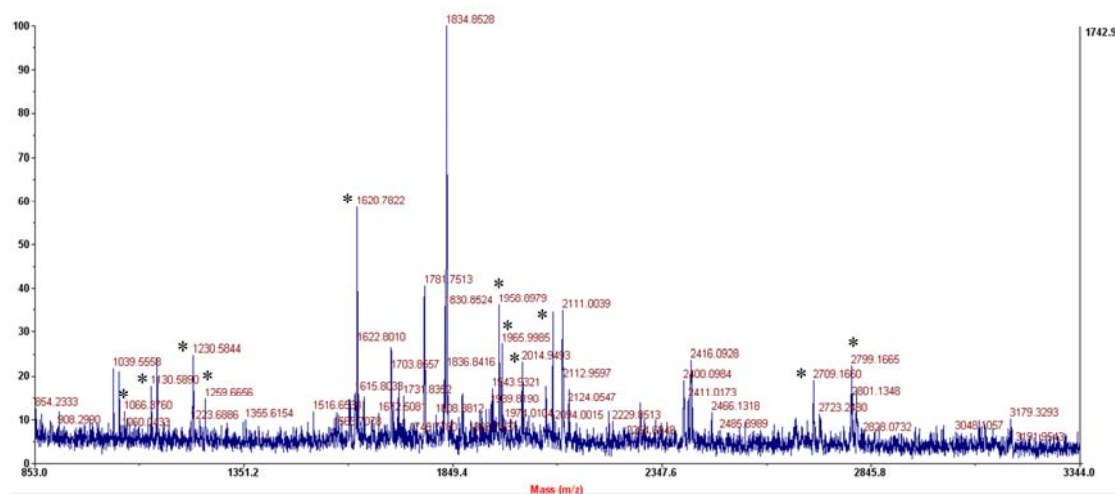
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
37 - 49	TTPSYVAFTDTER	1488.0990	+
57 - 72	NQVAMNPTNTVFDAGR	1806.3720	+
138 - 155	TVTNAVVTVPAYFNDSQR	1982.5020	+
160 - 171	DAGTIAGLNVL	1199.9640	+
221 - 236	STAGDTHLGGEDFDNR	1692.1830	+
237 - 247	MVNHFAEFKR	1392.0750	+
273 - 299	TLSSSTQASIEIDSLYEGIDFYTSITR	2998.1880	+
300 - 311	ARFEELNADLFR	1481.1550	+
326 - 342	LDKSQIHDIIVLVGGSTR	1838.4920	+
362 - 384	SINPDEAVAYGAAVQAAILSGDK	2260.7990	+
424 - 447	QTQTFTTYSQNPQGVLIQVYEGER	2775.0770	+

## C. Matched peptides (Bold Red) in the HSC70 amino acid sequence

1 MSKGA V G I D L G T T Y S C V G V F Q H G K V E I I A N D Q G N R **TTPS YVAFTDTER** L  
 51 I G D A A K **NQVA MNPTNTVFD** A K R L I G R R F D D A V V Q S D M K H W P F M V V N D A G R  
 101 P K V Q V E Y K G E T K S F Y P E E V S S M V L T K M K E I A E A Y L G K **TVT NAVVTVPAYF**  
 151 **NDSQR** Q A T K D **AGTIAGLNVL** R I I N E P T A A A I A Y G L D K K V G A E R N V L I F D L  
 201 G G G T F D V S I L T I E D G I F E V K **STAGDTHLGG EDFDNR** M V N H F I A E F K R K H K  
 251 K D I S E N K R A V R R L R T A C E R A K R **TLSSSTQA SIEIDSLYEG IDFYTSITRA**  
 301 **RFEELNADLF** R G T L D P V E K A L R D A K **LDKSQ IHDIIVLVGG** S T R I P K I Q K L L  
 351 Q D F F N G K E L N **KSINPDEAVA YGAAVQAAIL** S G D K S E N V Q D L L L L D V T P L S  
 401 L G I E T A G G V M T V L I K R N T T I P T K **QTQTFTT YSDNQPGLI QVYEGER** A M T  
 451 K D N N L L G K F E L T G I P P A P R G V P Q I E V T F D I D A N G I L N V S A V D K S T G K E N K  
 501 I T I T N D K G R L S K E D I E R M V Q E A E K Y K A E D E K Q R D K V S S K N S L E S Y A F N M K  
 551 A T V E D E K L Q G K I N D E D K Q K I L D K C N E I I S W L D K N Q T A E K E E F E H Q Q K E L E  
 601 K V C N P I I T K L Y Q S A G G M P G G M P G G F P G G G A P P S G G A S S G P T I E E V D

## A. MALDI-TOF MS spectrum (spot 5)



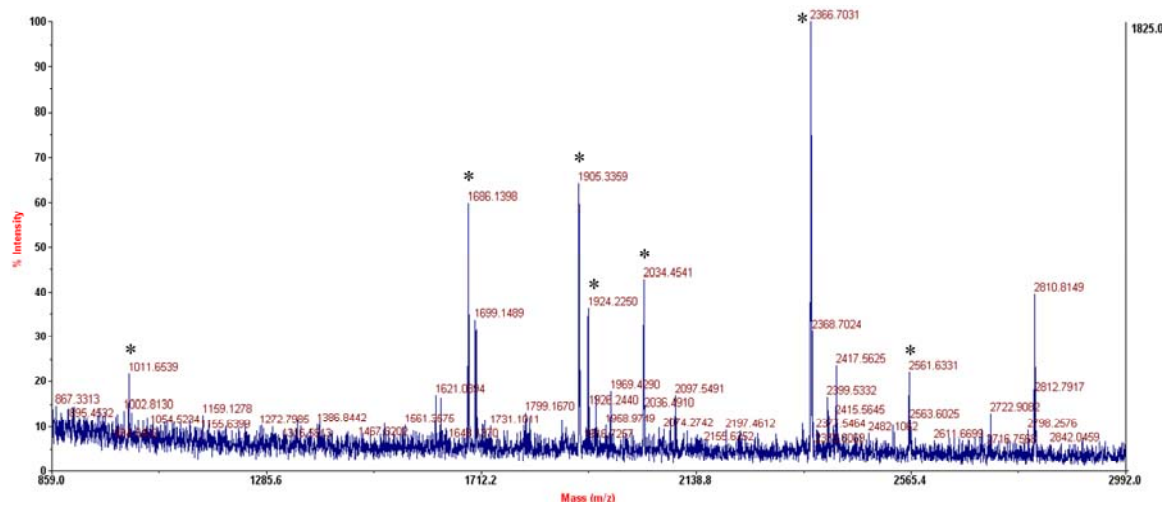
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
1 - 19	MREIVHIQAGQCGNQIGAK	2109.9740	+
47 - 62	INVYYNEAAGNKYVPR	1870.8500	+
78 - 103	SGPFGQIFRPDNFVFGQSGAGNNWAK	2798.1530	+
104 - 121	GHYTEGAELVDSVLDVVR	1958.9080	+
217 - 241	LTTPTYGDLNHLVSATMSGVTTCLR	2708.1630	+
242 - 251	FPGQLNADLR	1130.5870	+
242 - 252	FPGQLNADLRK	1258.6740	+
253 - 262	LAVNMVPFPR	1143.6220	+
263 - 276	LHFFMPGFAPLTSR	1620.8000	+
263 - 276	LHFFMPGFAPLTSR	1636.7920	+
310 - 318	YLTVA AIFR	1053.5920	+
363 - 380	MSATFIGNSTAIQELFKR	2013.9550	+
381 - 390	ISEQFTAMFR	1229.6140	+

## C. Matched peptides (Bold Red) in the Tubulin amino acid sequence

**1 MREIVHIQAG QCGNQIGAK**F WEVISDEHGI DPTGSYHGDS DLQLER**INVY**  
**51 YNEAAGNKYV P**RAILVDLEP GTMDSVRS**GP FGQIFRPDNF VFGQSGAGNN**  
**101 WAKGHYTEGA ELVDSVLDVV R**KESESCDCL QGFQLTHSLG GGTGSGMGTL  
**151 LISKIREEYP DRIMNTFSVM PSPKVS**DTVV EPYNATLSVH QLVENTDETY  
**201 SIDNEALYDI CFRTLK****L TTP TYGDLNHLVS ATMSGVTTCL R**FPGQLNADL  
**251 RKLAVNMVPF PRLHFFMPGF A**PLTSRGSQQ YRALTVPELT QQMFD SKNMM  
**301 AACDPRHGR Y LTVAAIFR**GR MSMKEVDEQM LNVQKNSSY FVEWIPNNVK  
**351 TAVCDIPPRG LK****MSATFIGN STAIQELFKR ISEQFTAMFR** RKAFLHWYTG  
**401 EGMDEMEFTE AESNMNDLVS EYQQYQ**DATA DEQGEFEEEE GEDEA

## A. MALDI-TOF MS spectrum (spot 6)



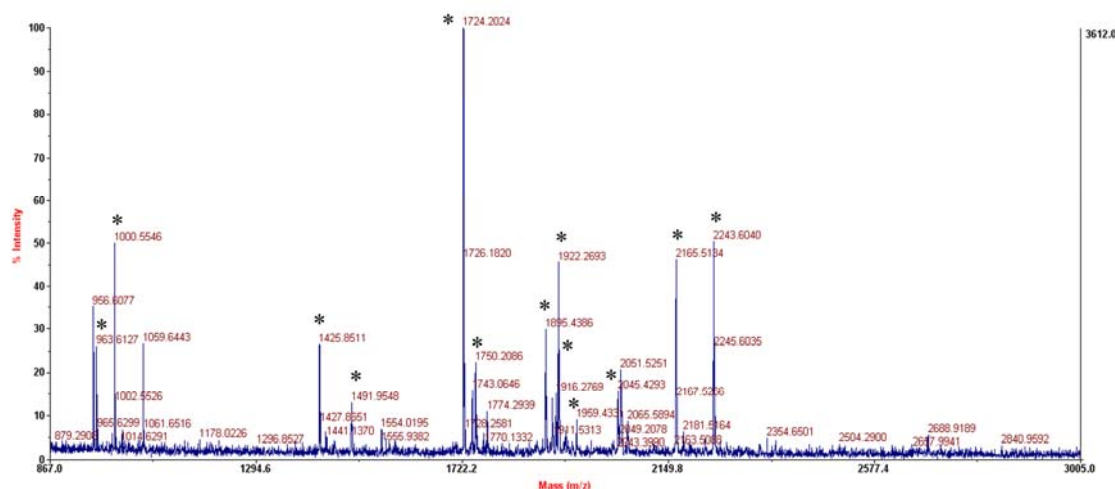
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	$[M+H]^+$	Matched
97 - 121	LVQDVANNTNEEAGDGTTTATVLAR	2560.6330	+
134 - 142	GANPVEIRR	1011.6500	+
206 - 221	TLNDELEIIEG MKFDR	1923.2330	+
206 - 221	TLNDELEIIEG MKFDR	1939.2330	+
250 - 268	KISSVQSIVPALEIANAHR	2033.4540	+
251 - 268	ISSVQSIVPALEIANAHR	1905.3260	+
269 - 290	KPLVIAEDVDGEALSTLVLNR	2365.7010	+
345 - 359	VGEVIVTKDDAMLLK	1631.1390	+
430 - 446	AAVEEGIVLGGGCALLR	1685.1500	+

## C. Matched peptides (Bold Red) in the HSP60 amino acid sequence

1 MLRLPTVLRQ MRPVSRALAP HLTRAYAKDV KFGADARALM LQGVDLLADA  
 51 VAVTMGPKGR TVIIEQSWGS PKVTKDGVTV AKSIDLKDKY KNIGAK**LVQD**  
 101 **VANNTNEEAG DGTTTATVLA** RSIKEGF EK ISK**GANPVEI** RRGVMLAVDA  
 151 VIAELKKQSK PVTTPPEEIAQ VATISANGDK DIGNIISDAM KKVGRKGVIT  
 201 VKDGK**TLNDE LEIIEG MKFD** RGYISPYFIN TSKGQKCEFQ DAYVLLSEK**K**  
 251 **ISSVQSIVPA LEIANahrkp LVIAEDVDG EALSTLVLNR** LKVGLQVVAV  
 301 KAPGFGDNRK NQLKDMAIAT GGAVFGEEGL NLNLEDVQAH DLGK**VGEVIV**  
 351 **TKDDAMLLK** GGDKAHIEKR IQEITEQLDI TTSEYEKEKL NERLAKLSDG  
 401 VAVLKVGGTS DVEVNEKKDR VTDALNATRA **AVEEGIVLGG GCALLR**CIPA  
 451 LDSLKPANED QKIGIEIKR ALKIPAMTIA KNAGVEGSLI VEKILQSSSE  
 501 VGYDAMLGDF VNMVEKGIID PTKVVRTALL DAAGVASLLT TAEAVVTEIP  
 551 KEEKDPGMGA MGGMGGGMGG GMF

## A. MALDI-TOF MS spectrum (spot 7)



## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
69-76	MVEGFFDR	1000.5540	+
108 - 123	IKPCNHVLSLSPFIR	1894.4380	+
125 - 136	DDGSWEVIEGYR	1425.8600	+
137 - 143	AQHSQHR	863.4720	+
212 - 231	KGFIGPGIDVPAPDMSTGER	2044.4190	+
213 - 231	GFIGPGIDVPAPDMSTGER	1916.2980	+
303 - 318	TFVVQGFQNVGLHSMR	1749.2120	+
347 - 363	ELEDFKLQHGSI LGFPK	1958.3770	+
400 - 420	IIAEGANGPTTPEADKIFLER	2242.5740	+
445 - 453	NLNHVS YGR	1059.6440	+
454 - 460	LTFKYER	956.6030	+
461 - 476	DSNYHLLMSVQESLER	1921.2680	+
481 - 496	HGGTIPVVPTAEFQDR	1724.1860	+
497 - 516	ISGASEKDIVHSGLAYTMER	2164.4730	+
504 - 516	DIVHSGLAYTMER	1491.9690	+
528 - 535	YNLGLDLR	963.6170	+

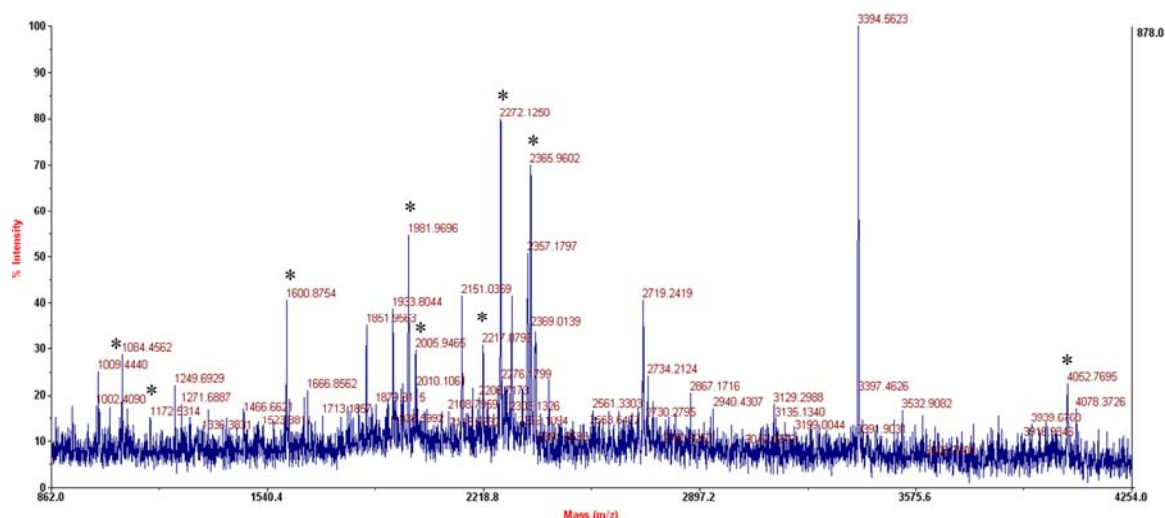
## C. Matched peptides (Bold) in the GDH amino acid sequence

1 MYRR LGEVLL LSRAGPAALG SAAADSAALL GWARGQPSAV PQPGLTPVAR  
 51 RHYSEAATDR EDDPNFFK**MV EGGFFDR**GASI VEDKLVEDLK TRENEEQKRN  
 101 RVRGILR**IK PCNHVLSLSF PIRRDDGSWE VIEGYRAQHS QHR**TPCKGGI  
 151 RYSTDVSVDE VKALASLMTY KCAVVDVDPFG GAKAGVKINP KNYTDNELEK  
 201 ITRRFTMELA **KKGFIGPGID VPAPDMSTGE REMSWIADTY ASTIGHYDIN**  
 251 **AHACVTGKPI SQGGIHGRIS** ATGRGVFHGI ENFINEASYM SILGMTPGLG  
 301 DK**TFVVQGF NVGLHSMRYL** HRFGAKCVGV GESDGSIWNP DGIDPK**ELED**  
 351 **FKLQHGSI LG FPKAKVYEGS ILEADCILI PAASEKQLTK** SNAPRVKAKI



**401 IAEGANGPTT PEADKIFLER NIMVIPDLYL NAGGVTVSYF EWLKLNHVS**  
**451 YGRLTFKYER DSNYHLLMSV QESLERKFGK HGGTIPVVPT AEFQDRISGA**  
**501 SEKDIVHSGL AYTHERSARQ IMRTAMKYNL GLDLRTAAYV NAIEKVKVY**  
**551 NEAGVTFT**

## A. MALDI-TOF MS spectrum (spot 8)



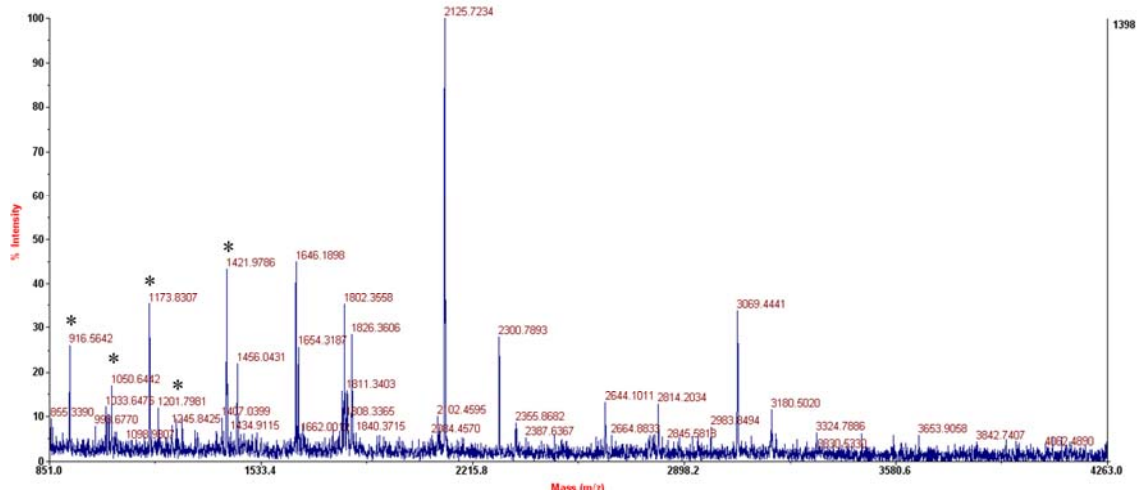
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	$[M+H]^+$	Matched
83 - 97	ASLQNLLSASQAQLR	1599.8770	+
106-142	AFTSQASATMHLPATIGDYTDFYSSLQHATNVGIMFR	4049.7500	+
143-162	GKENALLPNWLHLPVGYHGR	2271.2040	+
163-174	ASSVVVSGTPIR	1172.5610	+
175-194	RPMGQMRPDNSKPPVYGASK	2216.0580	+
195-211	RLDMELEMAFFVGPNGR	1981.9410	+
221-237	AQEHIFGMVLMNDWSAR	2004.9210	+
372-381	AIDVGQQQTR	1044.4740	+
382-402	TFLLDGDEVIITGHCQGDGYR	2366.0740	+

## C. Matched peptides (Bold Red) in the Fumarylacetoacetase amino acid sequence

1 MSFIPVAEDS DFPIQNLPGY VFSTQSNPKP RIGVAIGDQI LDLSVIKHLF  
 51 TGPVLSKHQH VFDETTLSNF MGLGQAAWKE AR**ASLQNLLS ASQAQLR**DDK  
 101 ELRQ**AFTSQ ASATMHLPAT IGDYTDFYSS LQHATNVGIM FR**GKENALLP  
 151 **NWLHLPVGYH GRASSVVVSG TPIRRPMGQM RPDNSKPPVY GASK**RLDMEL  
 201 **EMAFFVGPNG R**FGPEPIISK **AQEHIFGMVL MNDWSAR**DIQ QWEYVPLGPF  
 251 LGKSFQTTIS PWVVPMDALM PFVVPNPKQD PKPLPYLCHS QPYTFDINLS  
 301 VALKGEQMSQ AATICRSNFK HMYWTILQQL THHSVNGCNL RPDLLASGT  
 351 ISGSDPESFG SMLLELSWKGT K**AIDVGQQQT RTFLLDGDEV IITGHCQGDG**  
 401 **YR**VGFGQCAG KVLPALEPA

## A. MALDI-TOF MS spectrum (spot 9)



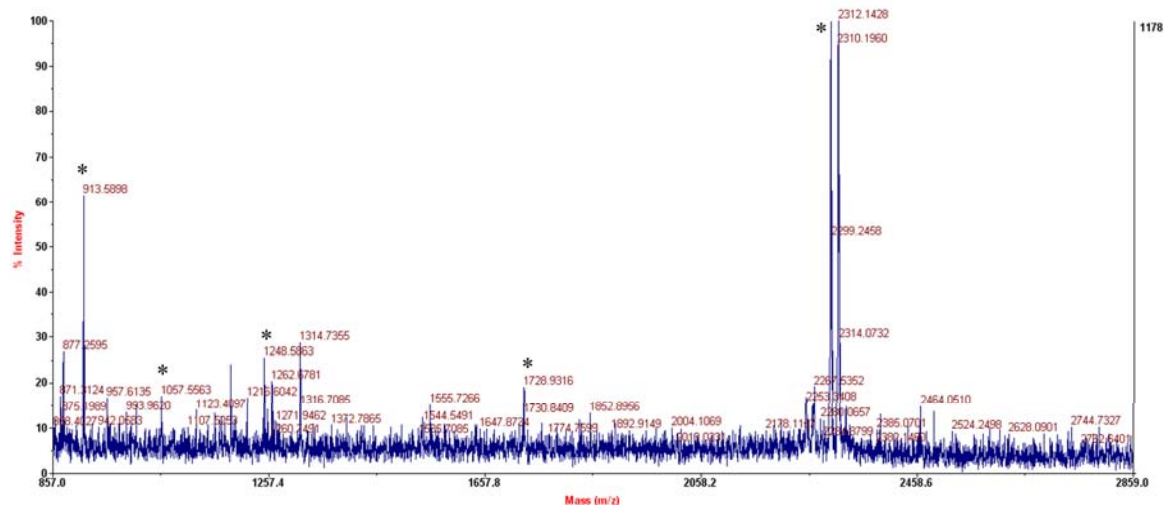
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	$[M+H]^+$	Matched
15-22	ELSDIALR	916.5810	+
61-69	QVLFSADDR	1050.6480	+
61-71	QVLFSADDRVK	1277.9280	+
102-111	GILVGIKVDK	1041.7720	+
305-315	ALQASALSAWR	1173.8340	+
319-331	DNAGAATEEFIKR	1421.9770	+
331-342	RAEMNGLAAQ GK	1245.8630	+

## C. Matched peptides (Bold Red) in the Fructose-bisphosphate aldolase C amino acid sequence

1 MPHSYPALSA EQK**ELSDIA LR**IVAPGKGI LAADESVGSM AKRLSQIGVE  
 51 NTEENRRLYR **QVLFSADDRV** KKCIGGVIFF HETLYQKDDN GVPFVRTIQE  
 101 **KGILVGIKVD** KGVVPLAGTD GETTTQGLDG LLERCAQYKK DGADFAKWRC  
 151 VLKISDRTPS ALAILENANV LARYASICQQ NGIVPIVEPE ILPDGDHDLK  
 201 RCQFVTEKVL AAVYKALSDH HVYLEGTLK PNMVTPGHAC PIKYSPEEIA  
 251 MATVTALRRT VPPAVPGVTF LSGGQSEEEA SLNLNAINRC SLPRPWALTF  
 301 SYGR**ALQASA LSAWR**QQRDN **AGAATEEFIK RAEMNGLAAQ GK**YEGSGDGG  
 351 AAAQSLYVAN HAY

## A. MALDI-TOF MS spectrum (spot10)



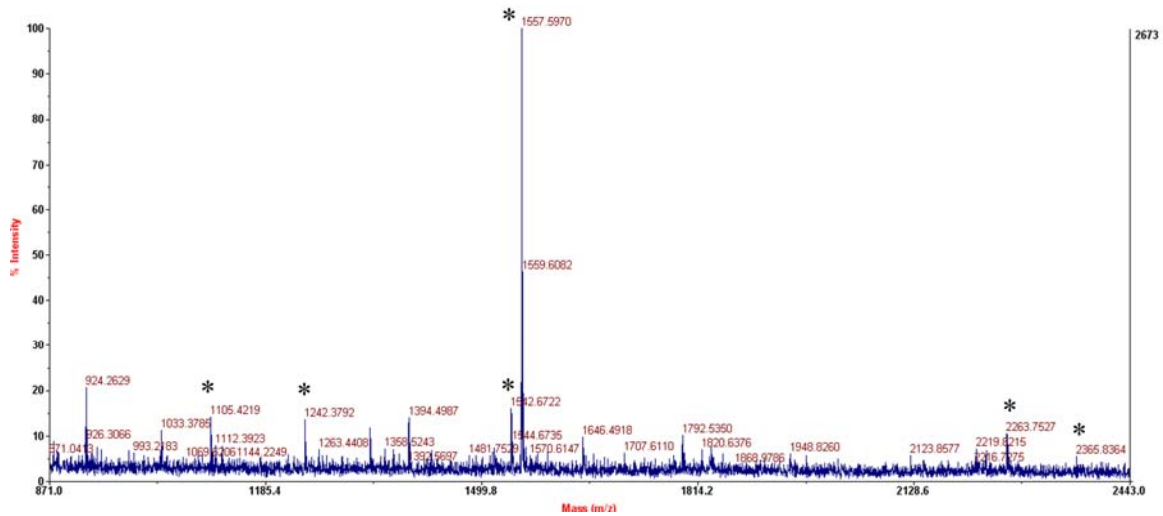
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
92-100	IVVVTAGVR	913.5910	+
92-107	IVVVTAGVRQEGESR	1727.8920	+
159-170	VIGSGCNLDSAR	1248.5780	+
171-178	FRYLMAEK	1057.5650	+
280-299	GMYGIENEVFLSLPCILNAR	2296.1350	+
309-318	LKDDEVAQLR	1186.6320	+

## C. Matched peptides (Bold Red) in the LDH amino acid sequence

1 MATLKEKLI A PVADDETAVP N NKITVVG VG QVGMACAISI LGKSLADELA  
 51 LVDVLEDK LK GEMMDLQHGS LFLQTPKIVA DKDYSVTANS **KIVVVTAGVR**  
 101 **QEGESR** LNL VQRNVNVFKF IIPQIVKYSP DCTIIVVSNP VDILTYVTWK  
 151 LSGLPKHR **VI GSGCNLDSAR FRYLMAEKL** G IHPSSCHGWI LGEHGDSSVA  
 201 VWSGVNVVAGV SLQELNPEMG TDNDSSENWKE VHKMVVD SAY EVIKLKG YTN  
 251 WAIGLSVADL IESMLKNLSR IHPVSTMVK **G MYGIENEVFL SLPCILNARG**  
 301 LTSVINQK **LK DDEVAQLR** KS ADTLWDIQKD LKDL

## A. MALDI-TOF MS spectrum (spot 11)



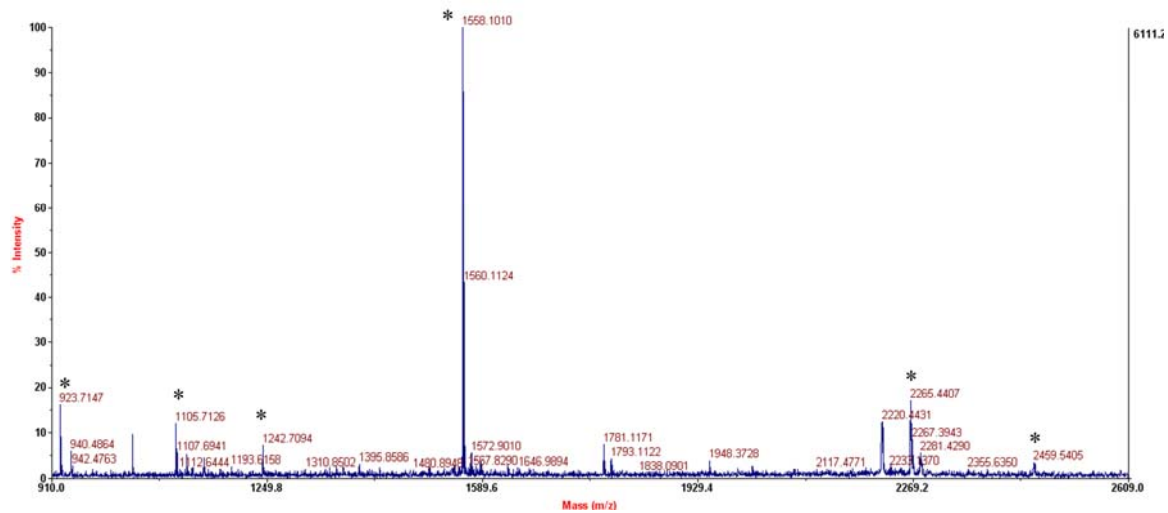
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	$[M+H]^+$	Matched
70-78	RQDLFIVSK	1105.4340	+
156-169	AIGVSNFNPLQIER	1557.5990	+
244-256	TTAQVLIRFPIQR	1542.6660	+
276-294	FRYLMAEK	2263.7400	+
280-299	VDFFELSNEDMATLLSYNR	2296.1350	+
307-316	HKDYPFHAEV	1242.3780	+

## C. Matched peptides (Bold Red) in the AR amino acid sequence

1 MASHLELNNG TKMPTLGLGT WKSPPGQVTE AVKVAIDMGY RHIDCAQVYQ  
 51 NEKEVGVALQ EKLKEQVVKR **QDLFIVSKLW** CTFHDQSMVK GACQKTLSDL  
 101 QLDYLDLYLI HWPTGFKPGP DYFPLDASGN VIPSDTDFVD TWTAMEQLVD  
 151 EGLVK**AIGVS NFNPLQIERI** LNKPGLKYKP AVNQIECHPY LTQEKLIEYC  
 201 HCKGIVVTAY SPLGSPDRPW AKPEDPSLLE DPRIKEIAAK YNK**TTAQVLI**  
 251 **RFPIQR**NLVV IPKSVTPARI AENFK**VDFE LS**NEDMATLL **SYNR**NWRVCA  
 301 LMSCAK**HKDY PFHAEV**

## A. MALDI-TOF MS spectrum (spot 12)



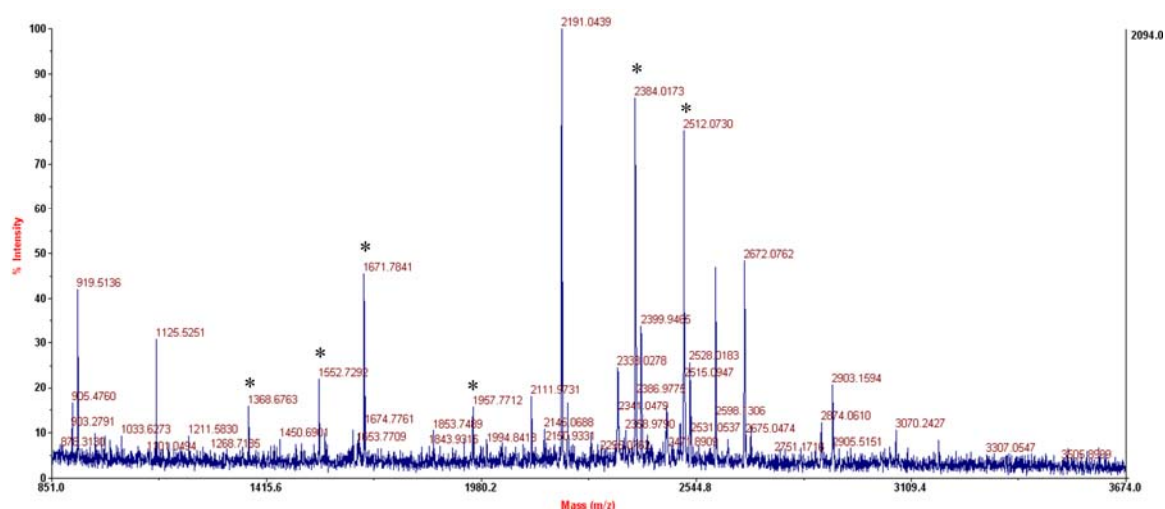
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
34-41	VAIDMGYR	924.4990	+
42-62	HIDCAQVYQNEKEVGVALQEK	2458.5160	+
70-78	RQDLFIVSK	1105.7080	+
156-169	AIGVSNFNPLQIER	1558.0120	+
196-203	LIEYCHCK	1122.5820	+
244-251	TTAQVLIR	901.5900	+
276-294	VDFE LSNEDMATLLSYNR	2264.3420	+
307-316	HKDY PFHAEV	1242.7110	+

## C. Matched peptides (Bold Red) in the AR amino acid sequence

1 MASHLELNNG TKMPTLGLGT WKSPPGQVTE AVK**VAIDMGY RHIDCAQVYQ**  
 51 **NEKEVGVALQ EKL**KEQVVKR **QDLFIVSK**LW CTFHDQSMVK GACQKTLSDL  
 101 QLDYLDLYLI HWPTGFKPGP DYFPLDASGN VIPSDTDFVD TWTAMEQLVD  
 151 EGLVK**AIGVS NFNPLQIER**I LNKPGLKYKP AVNQIECHPY LTQE**KLIEYC**  
 201 **HCK**GIVVTAY SPLGSPDRPW AKPEDPSLLE DPRIKEIAAK YNK**TTAQVLI**  
 251 **RFPIQR**NLVV IPKSVTPARI AENFK**VDFE LSNEDMATLL SYN**RNWRVCA  
 301 LMSCAK**HKDY PFHAEV**

## A. MALDI-TOF MS spectrum (spot 13)



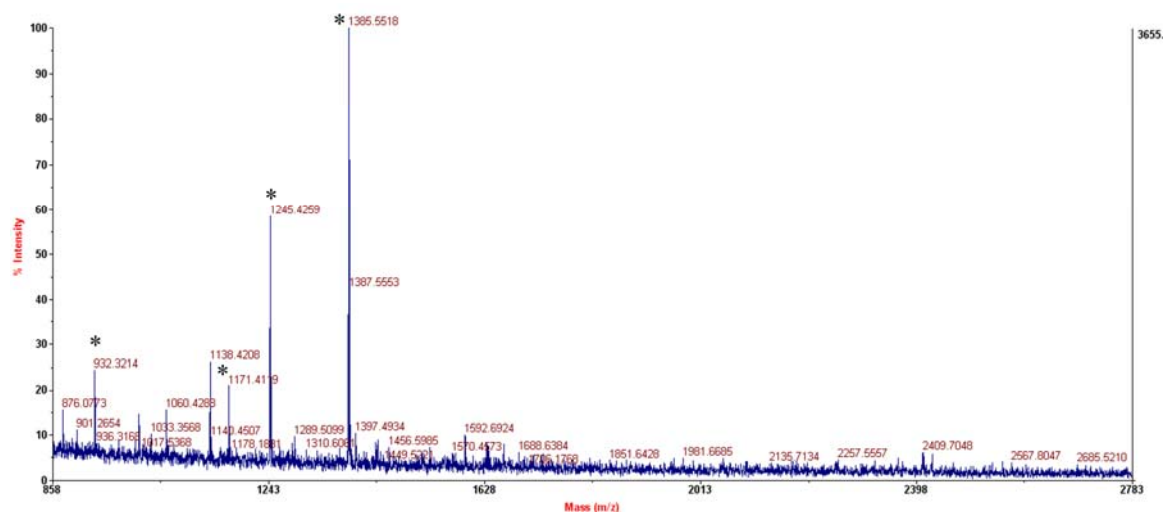
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
9-16	RVLVYGGR	924.4990	+
53-70	MTDSFTEQADQVTAEVGK	1956.7540	+
136-151	AALDGTPGMIGYMAK	1552.7290	+
152-164	GAVHQLCQSLAGK	1368.6720	+
165-188	NSGMPSGAAAIAVLPVTLDTPMNR	2382.9970	+
165-189	NSGMPSGAAAIAVLPVTLDTPMNRK	2511.0690	+
218-233	RPNSGSLIQVVTTDGK	1671.8010	+

## C. Matched peptides (Bold Red) in the DHPR amino acid sequence

1 MAASGEAR**RV LVYGGR**GALG SRCVQAFRR NWWVASIDVV ENEEASASVI  
 51 VK**MTDSFTEQ ADQVTAEVGK** LLGDQKVDAL LCVAGGWAGG NAKSKSLFKN  
 101 CDLMWKQSIW TSTISSHLAT KHLKEGGLLT LAGAK**AALDG TPGMIGYMA**  
 151 **KGAVHQLCQS LAGKNSGMPS GAAAIAVLPV TLDTPMNRKS** MPEADFSSWT  
 201 PLEFLVETFH DWITGNK**RPN SGSLIQVTT DGK**TELTPAY F

## A. MALDI-TOF MS spectrum (spot 14)



## B. Peptides detected by MALDI-TOF-MS

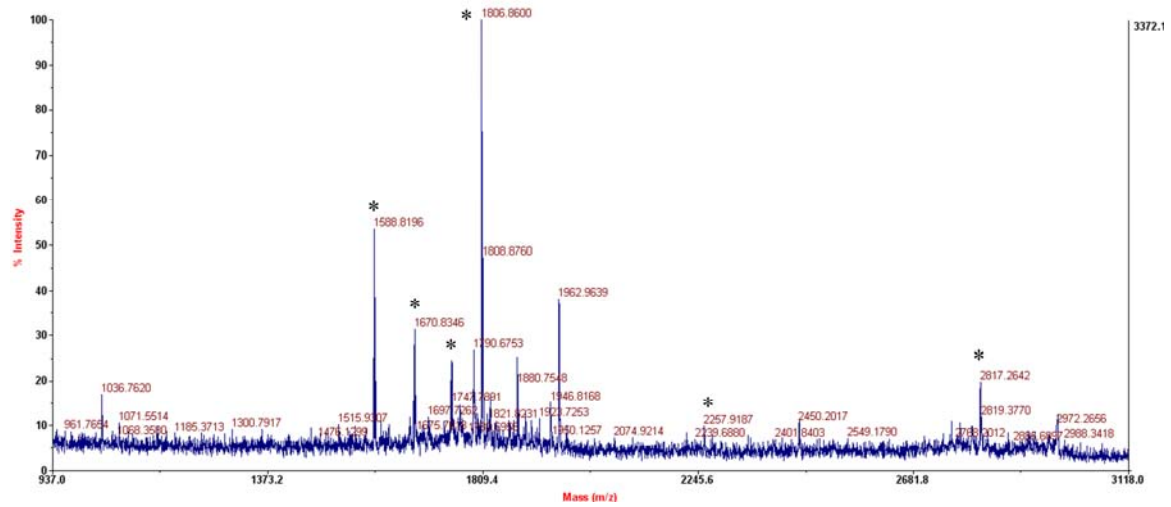
Peptide	Amino acid sequence	$[M+H]^+$	Matched
2-13	PGKPVLYFDGR	1385.6230	+
130-138	NRYFPAFEK	1171.5620	+
142-152	SHGQDYLVGNR	1245.5900	+
142-155	SHGQDYLVGNRLSR	1601.6710	+
197-204	FLQPGSQR	932.4410	+

## C. Matched peptides (Bold Red) in the GSTA3 amino acid sequence

**1** **MPGKPVLYHYFDGR**GRMEPIR WLLAAAGVEF EEQFLKTRDD LARLRNDGSL  
**51** MFQQVPMVEI DGMKLVQTRA ILNYIATKYN LYGKDMKERA LIDMYAEGVA  
**101** DLDEIVLHYP YIPPEKEAS LAKIKDKARN **RYFPAFEKVL** K**SHGQDYLVG**  
**151** **NRLSR**ADVYL VQVLYHVEEL DPSALANFPL LKALRTRVSN LPTVKK**FLQP**  
**201** **GSQR**KPLEDE KCVESAVKIF S



## A. MALDI-TOF MS spectrum (spot 15)



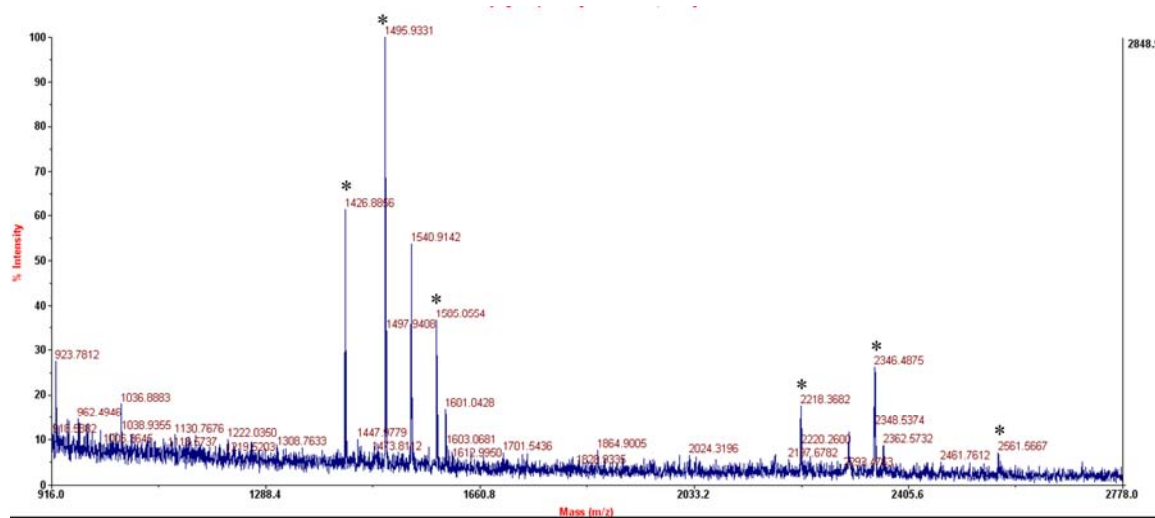
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
32-45	MLQLVEESKDAGIR	1588.8210	+
46-59	TLVMLDEQGEQLER	1660.8090	+
104-119	AWGNNQDGVVASQPAR	1669.7700	+
120-135	VVDEREQMAISGGFIR	1806.8720	+
137-161	VTNDARENEMDENLEQVSGIIGNLR	2816.2520	+
162-176	HMALDMGNEIDTQNR	1744.7850	
162-180	HMALDMGNEIDTQNRQIDR	2256.9290	

## C. Matched peptides (Bold Red) in the SNP25 amino acid sequence

1 MAEDADMRNE LEEMQRRADQ LADESLESTR **RMLQLVEESK DAGIRTLVML**  
**51 DEQGEQLERI** EEGMDQINKD MKEAEKNLTD LGKFCGLCVC PCNKLKSSDA  
**101 YKKA**WGNNQD **G**VVASQPARV **V**DEREQMAIS **G**GFIR**VTND ARENEMDENL**  
**151 EQVSGIIGNL** **R**HMALDMGNE **IDTQNRQIDR** IMEKADS NKT RIDEANQRAT  
**201 KMLGSG**

## A. MALDI-TOF MS spectrum (spot 16)



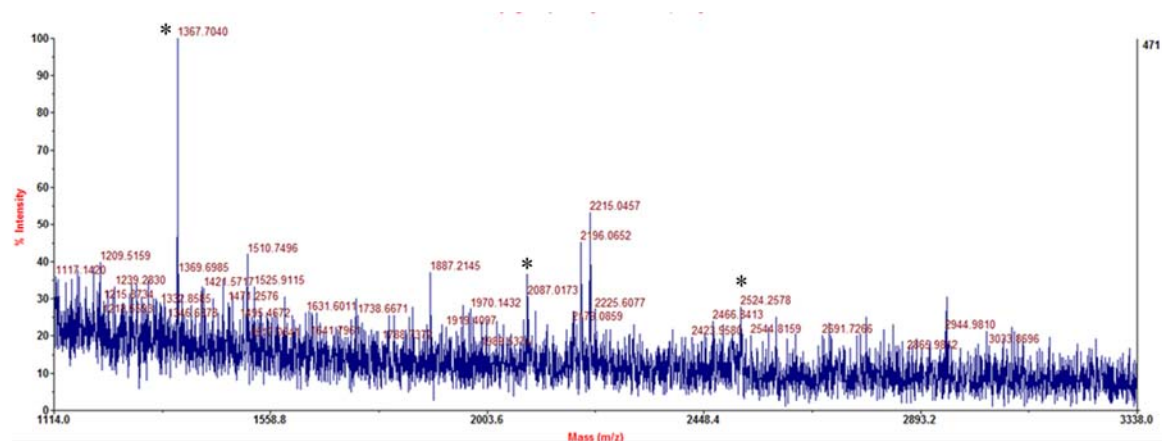
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	$[M+H]^+$	Matched
32-44	YGYTHLSTGDLLR	1495.9390	+
64 -77	GELVPLETVLDMLR	1585.0450	+
108-128	KIAQPTLLLYVDAGPETMTQR	2345.4940	+
109-128	IAQPTLLLYVDAGPETMTQR	2217.3710	+
156-167	ATEPVISFYDKR	1425.8930	+
172-194	KVNAEGSVDTVFSQVCTYLDLKL	2560.5700	+

## C. Matched peptides (Bold) in the AK amino acid sequence

1 MEDKLLKAKI IFVVGPGSG KGTQCEKIVQ **KYGYTHLSTG DLLRAEVSSG**  
 51 SSRGKMLSSI MEK**GELVPLE TVLDMLR**DAM LAKVDSSNGF LIDGYPREVK  
 101 QGEEFER**KIA QPTLLLYVDA GPETMTQR**LL KRGETSGRVD DNEETIKKRL  
 151 ETTYK**ATEPV ISFYDKR**GIV **RKVNAEGSVD TVFSQVCTYL DSLK**

## A. MALDI-TOF MS spectrum (spot 17)



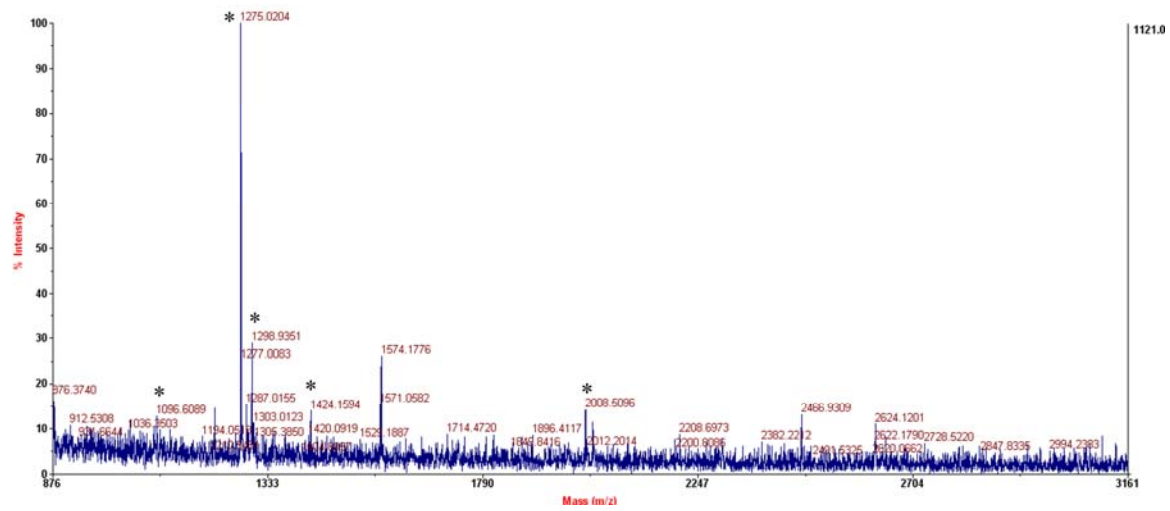
## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
72-92	HGGPADEERHVGDLGNVAAGK	2085.9560	+
93-116	DGVANVSIEDRVISLSGEHSIIGR	2523.1270	+
104-116	VISLSGEHSIIGR	1367.7090	+

## C. Matched peptides (Bold) in the SOD amino acid sequence

1 MAMKAVCVLK GDGPVQGVIIH FEQKASGEPV VVSGQITGLT EGEHGFHVHQ  
51 YGDNTQGCTT AGPHFNPHSK **KHGGPADEER HVGDLGNVAA GKDGVANVSI**  
101 **EDRVISLSGE HSIIGR**TMVV HEKQDDLKGG GNEESTKTGN AGSRLACGVI  
151 GIAQ

## A. MALDI-TOF MS spectrum (spot 18)



## B. Peptides detected by MALDI-TOF-MS

Peptide	Amino acid sequence	[M+H] <sup>+</sup>	Matched
19-31	VNPDDVGGEALGR	1298.9430	+
32-41	LLVVYPWTQR	1275.0190	+
42-60	YFDSFGDLSSASAIMGNPK	2007.5030	+
68 -77	VINAFNDGLK	1090.8120	
134-147	VVAGVASALAHKYH	1423.1460	

## C. Matched peptides (Bold Red) in the Hemoglobin subunit beta-1 amino acid sequence

1 MVHLTDAEKA AVNGLWGK**VN PDDVGGEALG RLLVVYPWTQ RYFDSFGDLS**  
**51 SASAIMGNPK** VKAHGKK**VIN AFNDGLKHLN NLK**GTFAHLS ELHCDKLHVD  
101 PENFRLGNM IVIVLGHHLG KEFTPCAQAA FQK**VVAGVAS ALAHKYH**