



## Protein Identification

**By in-gel trypsin digestion, LC-MS/MS peptide analysis and database searching**

**Order 12345**

**John Doe**

**ABCDE Pharma Inc.**

**Analysis start date: January 13, 2020**

**Analysis reporting date: January 20, 2020**

**Principal Investigator: Alphalyse**



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## Appendices

- Sample1\_IDs.xlsx

SAMPLE



## Samples received

The following sample was received at Alphalyse for protein analysis.

Sample 1

## Objective

Identification of proteins in gel piece. The protein gel piece is digested with trypsin and the resulting peptides analyzed by LC-MS/MS.

The MS data are searched against the SwissProt database containing all known public amino acid sequences to identify the protein.

The analysis provides the name of the identified protein in the database, the database accession number, the theoretical amino acid sequence and a list of observed peptides.

SAMPLE



## Analytical Procedure

### Introduction

Unknown proteins in electrophoresis gels can be identified by mass spectrometric peptide analysis and database searching. The proteins are cleaved into peptides by specific proteolytic cleavage and the peptide masses and peptide fragment masses determined at high sensitivity by nanoflow HPLC coupled to electrospray mass spectrometry (nanoLC-MS/MS). The database search can find the matching proteins if the amino acid sequences are present in the database. The observed peptides partially verify the database protein sequences in the protein sequence coverage maps.

### Experimental

#### DIGESTION

The proteins in the gel piece were reduced and alkylated with iodoacetamide, i.e. carbamidomethylated, and subsequently digested with trypsin that cleaves after lysine and arginine residues. The resulting peptides were concentrated by Speed Vac lyophilization.

#### nanoLC-MASS SPECTROMETRY

The peptides were dissolved and injected on an EVOsep One-LC system for MS/MS analysis on a Bruker Maxis Impact QTOF mass spectrometer.

#### DATABASE SEARCH

The public protein databases are downloaded from SwissProt. The Mascot software finds matching proteins in the database by their peptide masses and peptide fragment masses. The database search considers fixed modification of cysteines by carbamidomethylation, variable oxidation of methionine residues that may be a result of the sample preparation procedure, as well as N-terminal methionine truncation. The database search does not consider other known protein features recorded in the database, such as signal sequences, sequence variants and other post translational modifications. The protein identification is based on a probability-scoring algorithm and the significant best matching protein is shown in the Results.

Homologous proteins with a lower score are not shown in the report. If the protein from the correct organism is not present in the database, then a significant matching homologous protein from another organism is reported. If several different proteins are identified with a significant score, then several protein identifications are reported for the sample.

The identified database protein sequences are shown together with the obtained sequence coverage maps. The peptides used for the identification are highlighted in the sequence and the matching peptides are listed for comparison of the determined and calculated peptide masses. The same peptide mass can appear in multiple identifications. It is considered a positive identification when at least 2 matching peptides have an Ions Score above 20, or if a protein under 20 kDa has 1 peptide with an Ions Score above 50. The sequence coverage % is not considered for the identification. The total Mascot score provided for each identification is a total sum of all the individual peptide scores.

#### PROTEIN STRUCTURE AND FUNCTION

The identified protein can be looked up at the UniProt and NCBI websites (National Center for Biotechnology Information) by selecting the UniProt/NCBI Entry hyperlink. UniProt and NCBI contain collected information about the protein function and structure, and links to bioinformatics tools such as Conserved functional domains and Blast homology searches.

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## SUMMARY TABLE OF IDENTIFIED PROTEINS

The table shows the customer Sample name, the name of the protein identified in the database, the database entry name (accession number), the calculated molecular weight (MW) of the database sequence including eventual signal sequences and fixed modifications used in the database search, the identification Score calculated by the Mascot database search software, and the Sequence Coverage % calculated as the number of amino acids in observed peptides/total number of amino acids in database sequence."

SAMPLE

# Protein Identification

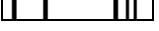
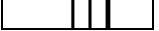
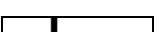
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## Results

The Mascot protein identifications along with the peptide identifications and search settings are documented in the Sample1\_IDs.xlsx file associated with each sample

### MS analysis 1: Sample 1

<b><i>Id#</i></b>	<b><i>Id</i></b>	<b><i>Protein name</i></b>	<b><i>Coverage</i></b>	<b><i>MW</i></b>	<b><i>Score</i></b>
1.1	HS71A_HUMAN	Heat shock 70 kDa protein 1A OS=Homo sapiens OX=9606 GN=HSPA1A PE=1 SV=1	 70.2 %	70294	2902
1.2	GRP75_BOVIN	Stress-70 protein, mitochondrial OS=Bos taurus OX=9913 GN=HSPA9 PE=2 SV=1	 47.6 %	73981	2502
1.3	Q9CDI9_LACLA	Cell shape-determining protein MreC OS= L. Lactis GN=mreC PE=1 SV=1	 40.2 %	31383	1168
1.4	MTA_HUMAN	Metastasis-associated protein OS=Homo sapiens OX=9606 GN=MTA2 PE=1 SV=1	 44.9 %	75717	1370
1.5	HSP6C_BOVIN	Heat shock cognate 71 kDa protein OS=Bos taurus OX=9913 GN=HSPA8 PE=1 SV=2	 22.1 %	71424	850
1.6	P66A_HUMAN	Transcriptional repressor p66-alpha OS=Homo sapiens OX=9606 GN=GATAD2A PE=1 SV=1	 13.7 %	68363	451
1.7	NUCL_HUMAN	Nucleolin OS=Homo sapiens OX=9606 GN=NCL PE=1 SV=3	 8.0 %	76625	220
1.8	IGH2M_MOUSE	Ig gamma-2 chain C region, membrane-bound form OS=Mus musculus OX=10090 GN=Ighg1 PE=1 SV=2	 12.0 %	44043	157
1.9	IF2B1_HUMAN	Insulin-like growth factor 2 mRNA-binding protein 1 OS=Homo sapiens OX=9606	 4.0 %	63783	96

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	GN=IGF2BP1 PE=1 SV=2				
1.10	DDX5_HUMAN Probable ATP-dependent RNA helicase DDX5 OS=Homo sapiens OX=9606 GN=DDX5 PE=1 SV=1	<div style="width: 30%; height: 10px; background-color: #ccc; margin-bottom: 5px;"></div> <div style="width: 30%; height: 10px; background-color: #000; margin-bottom: 5px;"></div> <div style="width: 30%; height: 10px; background-color: #ccc;"></div>	3.4 %	69618	94
1.11	UBIQ_CAMDR Ubiquitin OS=Camelus dromedarius OX=9838 PE=3 SV=2	<div style="width: 10%; height: 10px; background-color: #000; margin-bottom: 5px;"></div> <div style="width: 10%; height: 10px; background-color: #ccc; margin-bottom: 5px;"></div> <div style="width: 10%; height: 10px; background-color: #ccc;"></div>	22.8 %	8560	61

See Sample1\_IDs.xlsx for details.

## Protein details

### 1.1 Protein identification information

**Heat shock 70 kDa protein 1A OS=Homo sapiens OX=9606 GN=HSPA1A PE=1 SV=1**

Protein ID: HS71A_HUMAN	MW: 70294	pI: 5.48
Mascot score: 2902	Seq. Coverage: 70.2 %	Unique peptides: 37
<b>Uniprot link</b>	<b>Conserved Domain link</b>	<b>Blast link</b>

### Peptide map:

1 MAK**AAAIGID LGTTYSCVGV FQHGKVEIIA NDQGNRTTPS YVAFTDTERL IGDAAKNQVA**  
61 **LNPQNTVFDA KRLIGRKFGD PVVQSDMKHW PFQVINDGDK PKVQVSYKGE TKAFYPEEIS**  
121 **SMVLTKMKEI AEAYLGYPVT NAVITVPAYF NDSQRQATKD AGVIAGLNVL RIINEPTAAA**  
181 **IAYGLDRTGK GERNVLFSDL GGGTFDVSIL TIDDGIFEVK ATAGDTHLGG EDFDNRLVNH**  
241 **FVEEFKRGKH KDISQNKRRAV RRLRTACERA KR**T**LSSSTQ**A** SLEIDL**S**LEG **I**D**F**YT**S**IT**R**A**  
301 **RFEELCSDLF RSTLEPVEKA LRDAK**L**DK**A**Q **I**HDL**V**LV**G**GS **T**RIPKV**Q****K****LL** QDF**F**NGR**D****L**N**  
361 **KSINPDEAVA YGA**A**V**Q**A**AI**L MGDKSE**N**V**Q**D LLLL**D**V**A**PLS LGLETAG**G**V**M** TALIKRN**ST**I**  
421 PTK**Q**T**Q**IFT**T** YSDNQPG**V**LI**Q**Y**E**GERAMT KDN**N**LL**G**RF**E** LSGIPPAPRG VPQIEVTFDI  
481 DANGILNVTA TDKSTGKANK **I**T**I**TND**K**G**R**LI **S**KEE**I**ERM**V**Q EAEKYKA**E**DE VQRERVSA**K****N**  
541 ALESYAFNM**K** **S**AVE**E**DEGL**K**KG KISEADKKV LDK**C**QE**V**IS**W** LD**A**NT**L**A**E**K**D** E**F**E**H**K**R****K****E****L**  
601 QVCNPIIS**G** Y**Q**GAGGP**G**PG**G** GFG**A**Q**G**PK**G** SG**S**GPT**I**EE**V** D

### 1.2 Protein identification information

**Stress-70 protein, mitochondrial OS=Bos taurus OX=9913 GN=HSPA9 PE=2 SV=1**

Protein ID: GRP75_BOVIN	MW: 73981	pI: 5.97
Mascot score: 2502	Seq. Coverage: 47.6 %	Unique peptides: 30
<b>Uniprot link</b>	<b>Conserved Domain link</b>	<b>Blast link</b>

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## Peptide map:

1 MISASRAAVS RFVGTAASRG PTAARHQDGW NGLSHEAFRI VSRRDYASEA IKGAVVGI DL  
61 GTTNCSVAVM EGKQAK**VLEN AEGARTTPSV VAFTADGERL VGMPAKRQAV TNPNNTFYAT**  
121 **KRLIGRRYDD PEVKQDIKNV PFKIVRASNG DAWVEAHGKL YSPSQIGAFV LMKMKETAEN**  
181 **YLGHHTAKNAV ITVPAYFNDS QRQATKDAGQ ISGLNVLRVI NEPTAAALAY GLDKSEDKII**  
241 AVYDLGGGT F DISILEIQKG VFEVK**STNGD TFLGGEDFDQ ALLRHIVKEF KRETGVDLTK**  
301 **DNMALQRVRE AAEKAKCELS SSVQTDINLP YLTMDASGPK HLNMKLTRAQ FEGIVTDLIR**  
361 **RTIAPCQKAM QDAEVSKSDI GEVILVGGMT RMPKVQQTVQ DLFGRAPSKA VNPDEAVAIG**  
421 AAIQGGVLAG DVTDVLLLDV TPLSLGIETL GGVFTKLINR NTTIPTK**KSQ VFSTAADGQT**  
481 **QVEIKVCQGE REMAGDNKILL GQFTLIGIPP APRGVPQIEV TFDIDANGIV HVSAKDKGTG**  
541 **REQQIVIQQSS GGSKDDIEN MVKNAEKYAE EDRRKKERVE AVNMAEGIIH DTETKMEEFK**  
601 DQLPADECNK LKEEISKMRE LLARK**DSETG ENIRQAASSL QQASLKLFEM AYKKMASERE**  
661 GSGSSGTGEQ KDNQKEEKQ

## 1.3 Protein identification information

**Cell shape-determining protein MreC OS= L. Lactis GN=mreC PE=1 SV=1**

Protein ID:	MW: 31383	pI: 8.96
Mascot score: 1168	Seq. Coverage: 40.2 %	Unique peptides: 19
<b>Uniprot link</b>	<b>Conserved Domain link</b>	<b>Blast link</b>

## Peptide map:

1 MKLSLVAAML LLLSAARAEED DKKEDVGT VGIDLGTTYS CVGVFK**NGRV EIIANDQGNR**  
61 **ITPSYVAFTP EGERLIGDAA KNQLTSNPEN TVFDAKRLIG RTWNDEPSVQQ DIKFLPFKVV**  
121 **EKKTKPYIQV DIGGGQTKTFAPEEISAMVL TKMKETAEEAY LGKKVTHAVV TVPAYFNDAQ**  
181 **RQATKDAGTI AGLNVMRIIN EPTAAAIAYG LDKREGEKNI LVFDLGGGT DVSLLTIDNG**  
241 VFEVVATNGD THLGGEDFDQ RVMEHFIKLY Q

## 1.4 Protein identification information

**Metastasis-associated protein MTA2 OS=Homo sapiens OX=9606 GN=MTA2 PE=1 SV=1**

Protein ID: MTA2_HUMAN	MW: 75717	pI: 9.7
Mascot score: 1370	Seq. Coverage: 44.9 %	Unique peptides: 22
<b>Uniprot link</b>	<b>Conserved Domain link</b>	<b>Blast link</b>

## Peptide map:

1 MAANM**YRVDYVVFENSSSN PYLVRRIEEL NKTANGNVEA KVVCFLRRRD ISSSLNSLAD**  
61 **SNAREFEEES KQPGVSEQQR HQLKHRELFL SRQFESLPAT HIRGKCSVTL LNETDILSQY**  
121 **LEKEDCFFYS LVFDPVQKTL LADQGEIRVG CKYQAEIPDR LVEGESDNRN QQKMEMKVWD**  
181 **PDNPLTDRQI DQFLVVARAV GTFARALDCS SSIRQPSLHM SAAAA**SRDIT LFHAMDTLQR****

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241 NGYDLAKAMS TLVPQGGPVL CRDEMEESA SEAMLFEAL EKYGKDFNDI RQDFLPWKS  
301 ASIVQYYMW KTTDRYIQKQ RLKAAEADSK **LKQVYIPTYT KPNPNQIISV GSKPGMNGAG**  
**361 FQKGLTCESC HTTQSAQWYA WGPPNMQCRL CASCWIYWKK YGGLKTPTQL EGATRGTEP**  
421 H**SRGHLSRPE AQSLSPTYTT ANRAKLLAKN RQTFLLQT**TK LTRLARRMCR DLLQPRRAAR  
481 **RPYAPINANA IKAEC SIRLP KAAK TPLKI H PLVRLPLATI VKDLVAQAPL KPKTPRGTKT**  
541 PINRNQLSQN RGLGGIMVKR AYETMAGAGV PFSANGRPLA SGIRSSSQPA A**KRQKLNPAD**  
**601 APNPVVVFVAT KDTRALRKAL THLEMRRAA R RPNLPLKVKP TLIAVRPPVP LPAPSHAST**  
**661 NEPIVLED**

## 1.5 Protein identification information

**Heat shock cognate 71 kDa protein OS=Bos taurus OX=9913 GN=HSPA8 PE=1 SV=2**

Protein ID: HSP7C_BOVIN	MW: 71424	pI: 5.37
Mascot score: 850	Seq. Coverage: 22.1 %	Unique peptides: 13
<b>Uniprot link</b>	<b>Conserved Domain link</b>	<b>Blast link</b>

### Peptide map:

1 MSKGPAVGID LGTTYSVGV FQHGK**VEIIIA NDQGNRTTPS YVAFTDTERL IGDAAKNQVA**  
61 **MNPTNTVFD A KRLIGRRFDD AVVQSDMKHW PFMVVNDAGR PKVQVEYKGE TKSFYPEEV**  
121 **SMVLTKMKEI AEAYLGKTVT NAVVTVPAYF NDSQRQATKD AGTIAGLNVL RIINEPTAAA**  
181 **IAYGLDKKVG AERNVLIFDL GGGTFDV SIL TIEDGIFEVK STAGDTHLGG EDFDNRMVN**H  
241 FIAEFKRKH KDIENKRAV RRLRTACERA KRTLSSSTQA SIEIDSPLYEG IDFYTSITRA  
301 RFEELNADLF RGTLDPVEKA LRDAK**LDKSQ IHDIVLVGGS TRIPKIQKLL QDFFNGKELN**  
361 KSINPDEAVA YGAAVQAAIL SGDKSENVQD LLLL DVTPLS LGIETAGGVM TVLIKRN  
421 PTKQTQFTT YSDNQPGVLI QVYEGERAMT KDNNLLGKFE LTGIPPAPRG VPQIEVTFDI  
481 DANGILNVSA VDKSTGKENK **ITITNDKGRL SKEDIERMVQ EAEKYKAED E KQRDKVSSKN**  
541 **SLESYAFNMK ATVEDEKLQG KINDEDKQKI LDKCNEIINW LDKNQTAKEKE EFEHQKE**  
601 KVCNPIITKL YQSAGGMPGG MPGGMPGGFP GGGAPPSSGA SSGPTIEEV

## 1.6 Protein identification information

**Transcriptional repressor p66-alpha OS=Homo sapiens OX=9606 GN=GATAD2A PE=1 SV=1**

Protein ID: P66A_HUMAN	MW: 68363	pI: 9.95
Mascot score: 451	Seq. Coverage: 13.7 %	Unique peptides: 6
<b>Uniprot link</b>	<b>Conserved Domain link</b>	<b>Blast link</b>

### Peptide map:

1 MTEEACRTRS QKRALERDPT EDDVESKKIK MERGLIASDL NTDGDMR**VTP EPGAGPTQGL**  
61 **L RATEATAMA MGRGEGLVGD GPVDMRTSHS DMKSERRPPS PDVIVLSDNE QPSSPRVNGL**  
121 TTVALKETST EALMKSSPEE RERMIKQLKE ELRLEEAKLV LLKQLRQSQI Q**EATAQKPT**  
181 **GSVGSTVTT PPLVLRGTQNI PAGKPSLQTS SARMPGSVIP PPLVRGQQQA SS KLGQASS**  
241 QVVMPPPLVRG AQQIHSIRQH SSTGPPPLL APRASVPSVQ IQGQRIIQQG LIRVANVPNT

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301 SLLVNIPQPT PASLKGTTAT SAQANSTPTS VASVVTSAES PASRQAAAKL ALRKQLEKTL  
361 LEIPPPKPPA PEMNFLPSAA NNEFIYLVGL EEVVQNLET QGRMSAATVL SREPQYMCAQC  
421 KTDFTCRWRE EKSGAIMCEN CMTTNQKKAL KVEHTSRLKA AFVK**ALQQEQ** **EIEQRLLQQG**  
481 **TAPAQAKAEP** TAAPHPVLKQ VIKPPLLAF RSGEAR**DWSN** **GAVLQASSQL** SRGSATTPRG  
541 VLHTFSPSPK **IQNSASATAL** **VSRTGRHSE** TVSAGKGSAT SNWKTPPLST GGTLAFVSPS  
601 LAVHKSSSAV DRQREYLLDM IPPRSIPQSA TWK

## 1.7 Protein identification information

Nucleolin OS=Homo sapiens OX=9606 GN=NCL PE=1 SV=3

Protein ID: NUCL_HUMAN	MW: 76625	pI: 4.6
Mascot score: 220	Seq. Coverage: 8.0 %	Unique peptides: 3
<b>Uniprot link</b>	<b>Conserved Domain link</b>	<b>Blast link</b>

### Peptide map:

1 MVKLAKAGKN QGDPKKMAPP PKEVEEDSED EEMSEDEEDD SSGEEVVIPQ KKGKKAATS  
61 AKKVVVSPTK KVAVATPAKK AAVTPGKAA ATPAKKTVPK AKAVTPGKK GATPGKALVA  
121 TPGKKGAAIP AKGAKNGKNA KKEDSDEEED DDSEEDEEED EDEDEDEDEI EPAAMKAAA  
181 APASEDEDDE DDEDDEDDDD DEEDDSEEEA METTPAKGKK AAKVVPVKAK NVAEDEEEE  
241 DDEDEDEDDDD EDDEDEDDDED DEEEEEEEEEE EPVKEAPGKR KKEMAKQKAA PEAKKQKV  
301 TEPTTAFNLV VGNLNFNKSA PEL**KTGISDV** **FAKNDLAVV** D VRIGMTRKFG YVDFESAEDL  
361 EKALETGLK VFGNEIKLEK PKGKDSKKER DARTLLAKNL PY**KVTQDELK** **EVFEDAAEIR**  
421 LVSKDGKSKG IAYIEFKTEA DAEKTFEEKQ GTEIDGRSIS LYTTGEKGQN QDYRGGNST  
481 WSGES**CTLVL** **SNLSYSATEE** **TLQEVFEKAT** FIKVPQNQNG KSKGYAFIEF ASFEDAKEAL  
541 NSCNKREIEG RAIRLELQGP RGSPNARSQP SKTLFVKGLS EDTTEETLKE SFDGSVRARI  
601 VTDRETGSSK GFGFVDFNSE EDAKAAKEAM EDGEIDGNKV TLDWAKPKGE GGFGGRRGG  
661 GGFGGRRGG GRGGGGFGRGG RGGRGGGGDH KPQGKTKFE

## 1.8 Protein identification information

Ig gamma-1 chain C region, membrane-bound form OS=Mus musculus OX=10090  
GN=Ighg1 PE=1 SV=2

Protein ID: IGH1M_MOUSE	MW: 44043	pI: 6.02
Mascot score: 157	Seq. Coverage: 12.0 %	Unique peptides: 3
<b>Uniprot link</b>	<b>Conserved Domain link</b>	<b>Blast link</b>

### Peptide map:

1 AKTTPPSVYP LAPGSAAQTN SMVTLGCLVK GYFPEPVTVT WNSGSLSSGV HTFPAVLQSD  
61 LYTLSSSVTV PSSPRPSETV TCNVAHPASS TKVDKKIVPR **DCGCKPCICT** **VPEVSSVFIF**  
121 **PPKPKDVLTI** **TLTP**KVTCVV VDISKDDPEV QFSWFVDDVE VHTAQTOPRE EQFNSTFRSV  
181 SELPIMHQDW LNGKEFKC**RV** **NSAAFPAPI** KTISKTKGRP KAPQVYTIPP PKEQMAKDKV  
241 SLTCMITDFF PEDITVEWQW NGQPAENYKN TQPIMNTNGS YFVYSKLNVQ KSNWEAGNTF  
301 TCSVVLHEGLH NHHTEKSLSH SPGLQLDETC AEAQDGELDG LWTTITIFIS LFLLSVCYSA

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361 AVTLFKVKWI FSSVVELKQT LVPEYKNMIG QAP

## 1.9 Protein identification information

**Insulin-like growth factor 2 mRNA-binding protein 1 OS=Homo sapiens OX=9606  
GN=IGF2BP1 PE=1 SV=2**

Protein ID: IF2B1_HUMAN	MW: 63783	pI: 9.26
Mascot score: 96	Seq. Coverage: 4.0 %	Unique peptides: 2
<b><i>Uniprot link</i></b>	<b><i>Conserved Domain link</i></b>	<b><i>Blast link</i></b>

### Peptide map:

1 MNKLYIGNLN ESVTPADLEK VFAEHKISYS GQFLVKSGYA FVDCPDEHWA MKAIETFSGK  
61 VELQGKRLEI EHSVPKKQRS RKIQIRNIPP QLRWEVLDL LAQYGTVENC EQVNTESETA  
121 VVNVTYSNRE QTRQAIMKLN GHQLENHALK VSYIPDQEIA QGPENGRRGG FGSRGQPRQG  
181 SPVAAGAPAK **QQQVDIPLRL LVPTQYVGAI IGK**EGRATIRN ITKQTQSKID VHRKENAGAA  
241 EKAISVHSTP EGCSSACKMI LEIMHKEAKD TKTADEVPLK ILAHNNFVGR LIGKEGRNLK  
301 KVEQDTETKI TISSLQDLTL YNPERTITVK GAIENCCRAE QEIMKKVREA YENDVAAMSL  
361 QSHLIPGLNL AAVGLFPASS SAVPPPPSSV TGAAPYSSFM QAPEQEMVQV FIPAQAVGAI  
421 IGKKGQHIKQ LSRFASASIK IAPPETPDSK VRMVIITGPP EAQFKAQGRI YGKLKEENFF  
481 GPKEEVKLET HIRVPASAAG RVIGKGGKTV NELQNLTAEE VVVPRDQTPD ENDQVIVKII  
541 GHFYASQMAQ RKIRDILAQV KQQHQKGQSN QAQARRK

## 1.10 Protein identification information

**Probable ATP-dependent RNA helicase DDX5 OS=Homo sapiens OX=9606 GN=DDX5  
PE=1 SV=1**

Protein ID: DDX5_HUMAN	MW: 69618	pI: 9.06
Mascot score: 94	Seq. Coverage: 3.4 %	Unique peptides: 2
<b><i>Uniprot link</i></b>	<b><i>Conserved Domain link</i></b>	<b><i>Blast link</i></b>

### Peptide map:

1 MSGYSSDRDR GRDRGFGAPR FGGSRAGPLS GKKFGNPGEK LVKKWNLD LPKFEKNFYQ  
61 EHPDLARRTA QEVTYRRSK EITVRGHNC P KPVLNFYEA FPANVMDVIA RQNFTPEPTAI  
121 QAQGWPVALS GLDMVGVAQT GSGKTLSYLL PAIVHINHQ P FLERGDGPIC LVLAPTRELA  
181 QQVQQVAAEY CRACRLKSTC IYGGAPKGPO IRDLERGVEI CIATPGR**LID FLECGKTNLR**  
241 RTTYLVLDEA DRMLDMGFEP QIRKIVDQIR PDRQTLMSA TWPKEVRQLA EDFLKDYIHI  
301 NIGALELSAN HNILQIVDVC HDVEKDEKLI RLMEEIMSEK ENKTIVFVET KRRCDELTRK  
361 MRRDGWPAMG IHGDKSQWER DWVLNEFKHG **KAPILIATDV ASRGLDVEDV** KFVINYDYPN  
421 SSEDYIHRIG RTARSTKTGT AYTFFTPNNI KQVSDLISVL REANQAINPK LLQLVEDRGS  
481 GRSRGRGGMK DRRDRYSAG KRGGFNTFRD RENYDRGYSS LLKRDGAKT QNGVYSAANY  
541 TNGSFGSNFV SAGIQTSFRT GNPTGTYQNG YDSTQQYGSN VPNMHNGMNQ QAYAYPATAA  
601 APMIGYPMPM GYSQ

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## 1.11 Protein identification information

**Ubiquitin OS=Camelus dromedarius OX=9838 PE=3 SV=2**

Protein ID: UBIQ_CAMDR	MW: 8560	pI: 6.56
Mascot score: 61	Seq. Coverage: 22.8 %	Unique peptides: 1
<b><i>Uniprot link</i></b>	<b><i>Conserved Domain link</i></b>	<b><i>Blast link</i></b>

### Peptide map:

1 MQIFVKTLTG K**TITLEVEPS DTIENVKAKI** QDKEGIPPDQ QRLIFAGKQL EDGRTLSdyn  
61 IQKESTLHLV LRLRGG

SAMPLE