

Supplementary Table 1. Gossypol-induced Increase of Levels of Reduced Cysteine-containing Peptides

| Accession   | Description                                           | Sequences of Cys-containing peptides |
|-------------|-------------------------------------------------------|--------------------------------------|
| IPI00018146 | 14-3-3 protein theta                                  | SICTTVLELLDK                         |
| IPI00019927 | 26S proteasome non-ATPase regulatory subunit 7        | RYCPNSVLVIDVKPK                      |
| IPI00917420 | 30 kDa protein                                        | SCSGVEFSTSGSNTDTGK                   |
|             |                                                       | YKWCEYGLTFTEK                        |
| IPI01010885 | 3-oxoacyl-CoA thiolase                                | VNPLGGAVALGHPLGCTGAR                 |
| IPI00025091 | 40S ribosomal protein S11                             | DVQIGDIVTVGECRPLSK                   |
| IPI00013917 | 40S ribosomal protein S12                             | LVEALCAEHQINLIK                      |
| IPI00221091 | 40S ribosomal protein S15a                            | CGVISPR                              |
|             |                                                       | QVLIRPCSK                            |
| IPI00013485 | 40S ribosomal protein S2                              | GCTATLGNFAK                          |
| IPI00927101 | 40S ribosomal protein SA                              | ADHQPLTEASYVNLPTIALCNTDSPLR          |
|             |                                                       | YVDIAIPCNNK                          |
| IPI00784154 | 60 kDa heat shock protein, mitochondrial              | CIPALDSLTPANEDQK                     |
| IPI01012685 | 60 kDa protein                                        | NAVWALSNLCR                          |
| IPI00008530 | 60S acidic ribosomal protein P0                       | CFIVGADNVGSK                         |
| IPI00010153 | 60S ribosomal protein L23                             | ECADLWPR                             |
| IPI00651660 | 60S ribosomal protein L3 isoform b                    | TVFAEHISDECK                         |
|             |                                                       | VACIGAWHPAR                          |
| IPI00983316 | 60S ribosomal protein L30                             | LVILANNCPALR                         |
|             |                                                       | VCTLAIDPGDSDIIR                      |
| IPI00216237 | 60S ribosomal protein L36                             | EVCGFAPYER                           |
| IPI00003918 | 60S ribosomal protein L4                              | FCIWTESAFR                           |
| IPI00981109 | Acetolactate synthase-like protein                    | GALQAVDQLSLFRPLCK                    |
| IPI00030363 | Acetyl-CoA acetyltransferase, mitochondrial           | QAVLGAGLPSTPCTTINK                   |
| IPI00028091 | Actin-related protein 3                               | LPACVVDCGTGYTK                       |
| IPI00007188 | ADP/ATP translocase 2                                 | KGTDIMYGTGLDCWR                      |
| IPI00981910 | aldo-keto reductase family 1 member C2-like isoform 1 | YKPVCNQVECHPYFNQR                    |
| IPI00291483 | Aldo-keto reductase family 1 member C3                | YKPVCNQVECHPYFNR                     |
| IPI00413641 | Aldose reductase                                      | YKPAVNQIECHPYLTQEK                   |
| IPI00013808 | Alpha-actinin-4                                       | CQLEINFNTLQTK                        |
|             |                                                       | EGLLLWCQR                            |
| IPI00909703 | Annexin                                               | GVGTDEACLIEILASR                     |
| IPI00218918 | Annexin A1                                            | MYGISLCQAILDETKGDYEK                 |
| IPI00793199 | annexin A4                                            | GAGTDEGLIEILASR                      |
| IPI01011319 | annexin A6 isoform 2                                  | CLIEILASR                            |
|             |                                                       | DAISGIGTDEKCLIEILASR                 |
| IPI00020632 | Argininosuccinate synthase                            | FAELVYTGFWHSPECFVR                   |
| IPI00007611 | ATP synthase subunit O, mitochondrial                 | GEVPCTVTSASPLEEATLSELK               |
| IPI00021290 | ATP-citrate synthase                                  | GVTIIGPATVGGIKPGCFK                  |

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| IPI00844578 | ATP-dependent RNA helicase A                                                      | AAECNIVVTQPR                 |
| IPI00000643 | BAG family molecular chaperone regulator 2                                        | FQSIVIGCALEDQKK              |
| IPI00941747 | Calnexin                                                                          | CESAPGCGVWQRPVIDNPNYK        |
|             |                                                                                   | CGEDYKLHFIFR                 |
| IPI00020599 | Calreticulin                                                                      | CKDDEFTHLYTLIVRPDNTYEVK      |
|             |                                                                                   | HEQNIDCGGGYVK                |
| IPI00465436 | Catalase                                                                          | LGPNYLHIPVNCPPYR             |
| IPI00976765 | CD151 antigen                                                                     | TVVALCGQR                    |
| IPI00983214 | CD81 antigen                                                                      | TFHETLDCCGSSTLTALTTSVLK      |
| IPI00645589 | choline transporter-like protein 2 isoform 2                                      | IFDSDPCPFTAK                 |
| IPI00297579 | Chromobox protein homolog 3                                                       | CPQIVIAFYEER                 |
| IPI00985305 | Complement decay-accelerating factor                                              | KSCPNPGEIR                   |
| IPI00290142 | CTP synthase 1                                                                    | GLGLSPDLVVCR                 |
| IPI00005707 | C-type mannose receptor 2                                                         | LQGAUCGVSSEPPPPR             |
| IPI00013847 | Cytochrome b-c1 complex subunit 1, mitochondrial                                  | AVELLGDIVQNCSEDSQIEK         |
|             |                                                                                   | HLGGIPWTYAEDAVPTLTPCR        |
|             |                                                                                   | LCTSATESEVAR                 |
|             |                                                                                   | YIYDQCPAVAGYGPIQLPDYNR       |
| IPI00141318 | Cytoskeleton-associated protein 4                                                 | SSSSSSASAAAAAASSSASCSR       |
| IPI00011416 | Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial                        | YCAQDAFFQVK                  |
| IPI01011421 | Dihydrolipoyl dehydrogenase                                                       | VCHAHPTLSEAFR                |
| IPI00215911 | DNA-(apurinic or apyrimidinic site) lyase                                         | CSEKNLPAELQELPGLSHQYWSAPSDK  |
|             |                                                                                   | GLDWVKEEAPDILCLQETK          |
|             |                                                                                   | KPLVLCGDLNVAHEEIDLR          |
|             |                                                                                   | LDYFLLSHSLPALCDSK            |
| IPI00008454 | DnaJ homolog subfamily B member 11                                                | FQMTQEVVCECPNVK              |
| IPI00025874 | Dolichyl-diphosphooligosaccharide—protein glycosyltransferase subunit 1 precursor | VACITEQVLTLVNKR              |
| IPI00396485 | Elongation factor 1-alpha 1                                                       | KDGNASGTTLLEALDCILPPTPTDKPLR |
| IPI00937615 | Elongation factor 1-gamma                                                         | WFLTCINQPQFR                 |
| IPI00186290 | Elongation factor 2                                                               | ETVSEESNVLCLSK               |
|             |                                                                                   | TFCQLILDPIFK                 |
| IPI00791564 | Enolase                                                                           | FGANAILGVSLAVCK              |
|             |                                                                                   | SGETEDTFIADLVVGLCTGQIK       |
| IPI00009896 | Epoxide hydrolase 1                                                               | FTPPLEDSCFHYGFNSNYLK         |
| IPI00386755 | ERO1-like protein alpha                                                           | RDCAVKPCQSDEVDPGIK           |
|             |                                                                                   | YSEEANNLIEECEQAER            |
| IPI00219682 | Erythrocyte band 7 integral membrane protein                                      | GPGLFFILPCTDSFIK             |
| IPI00297982 | Eukaryotic translation initiation factor 2 subunit 3                              | IVLTNPVCTEVGEK               |
| IPI00010105 | Eukaryotic translation initiation factor 6                                        | ASFENNCEIGCFAK               |
| IPI00745613 | Exosome complex component RRP41                                                   | ALVNCQYSSATFSTGER            |
| IPI00005154 | FACT complex subunit SSRP1                                                        | ADVIAQTGDAICIFR              |
| IPI00914971 | farnesyl pyrophosphate synthase isoform b                                         | CSWLVLVQCLQR                 |

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| IPI00163187 | Fascin                                                             | LSCFAQTVSPA EK                   |
|             |                                                                    | QIWTLEQPPDEAGSAAVCLR             |
|             |                                                                    | VGKDELFALEQSCAQVVLQAANER         |
| IPI00900293 | filamin-B isoform 1                                                | SGCIVNNLAEFTVDPK                 |
|             |                                                                    | SPFVVQVG EACNP NACR              |
| IPI00418262 | Fructose-bisphosphate aldolase                                     | YASICQQNGIVPIVEPEILPDGDHDLKR     |
| IPI00465439 | Fructose-bisphosphate aldolase A                                   | CPLLKPWALTFSYGR                  |
|             |                                                                    | RALANSLACQ GK                    |
|             |                                                                    | VNPCI GG VILFHETLYQK             |
| IPI00219219 | Galectin-1                                                         | FNAHG DANTIVCNSK                 |
| IPI00219018 | Glyceraldehyde-3-phosphate dehydrogenase                           | IISNASCTTNCLAPLAK                |
|             |                                                                    | VPTANVSVDLTCR                    |
| IPI00942902 | Guanine deaminase                                                  | GASIAHCPNSNLSLSSGFLNVLEV LK      |
| IPI00848226 | Guanine nucleotide-binding protein subunit beta-2-like 1           | TNHIGHTGYLNTVTVSPDGS LCASGGK     |
| IPI00013881 | Heterogeneous nuclear ribonucleoprotein H                          | GLPWSCSADEVQR                    |
| IPI00419258 | High mobility group protein B1                                     | MSSYAFFVQTCREEHKK                |
|             |                                                                    | RPPSAFFLFCSEYRPK                 |
| IPI00239077 | Histidine triad nucleotide-binding protein 1                       | CLAFHDISPQAPTHFLVIPK             |
|             |                                                                    | IIFEDDRCLAFHDISPQAPTHFLVIPK      |
| IPI00465070 | Histone H3.1                                                       | FQSSAVMALQEACEAYLVGLFEDTNLCAIHAK |
| IPI00015018 | Inorganic pyrophosphatase                                          | AIVDALPPPCESACTVPTDVKWFHHQK      |
| IPI00291510 | Inosine-5'-monophosphate dehydrogenase 2                           | HGFCGIPITDGR                     |
| IPI00013890 | Isoform 1 of 14-3-3 protein sigma                                  | EKVETELQGVCDTVLGLLDSHLIK         |
|             |                                                                    | GAVEKGEELSCEER                   |
| IPI00299608 | Isoform 1 of 26S proteasome non-ATPase regulatory subunit 1        | SNCKPSTFAYPAPLEVPK               |
|             |                                                                    | TPEQCPSVVLLSESYNPHVR             |
| IPI00031131 | Isoform 1 of Adipocyte plasma membrane-associated protein          | TRDDEPVCGRPLGIR                  |
| IPI00455315 | Isoform 1 of Annexin A2                                            | GDLENAFLNLVQC IQNKPLYFADR        |
| IPI00011062 | Isoform 1 of Carbamoyl-phosphate synthase [ammonia], mitochondrial | ILDIYHQEACGGCIISVGGQIPNNLAVPLYK  |
|             |                                                                    | SAYALGGLGSGICPNRET LMDLSTK       |
| IPI00032038 | Isoform 1 of Carnitine O-palmitoyltransferase 1, liver isoform     | LLGSTIPLCSAQWER                  |
| IPI00296337 | Isoform 1 of DNA-dependent protein kinase catalytic subunit        | LPVLAGCLK                        |
| IPI00022143 | Isoform 1 of Extended synaptotagmin-1                              | AVYSTNCPVWEEAFR                  |
| IPI00784295 | Isoform 1 of Heat shock protein HSP 90-alpha                       | HGLEVIYMI EPIDEYCVQQLK           |
| IPI00217966 | Isoform 1 of L-lactate dehydrogenase A chain                       | GLYGIKDDVFLSVPCILGQNGISDLVK      |
|             |                                                                    | VIGSGCNLDSAR                     |
| IPI00397526 | Isoform 1 of Myosin-10                                             | EDQSILCTGESGAGK                  |
|             |                                                                    | VEDMAELTCLNEASVLHNLK             |
| IPI00019502 | Isoform 1 of Myosin-9                                              | CNGVLEGIR                        |
|             |                                                                    | KLEEEQIILEDQNCK                  |
|             |                                                                    | KQELEEICHDEAR                    |
| IPI00303158 | Isoform 1 of N-acylneuraminase cytidyltransferase                  | VGLSGAPADACSTAQK                 |
| IPI00163381 | Isoform 1 of Prolyl 3-hydroxylase 1                                | TVTAEVQPQCGR                     |

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| IPI00747309 | Isoform 1 of Regulator of chromosome condensation                          | SGQVYSFGCNDEGALGR              |
| IPI00219617 | Isoform 1 of Ribose-phosphate pyrophosphokinase 2                          | VTAVIPCFPYAR                   |
| IPI00021187 | Isoform 1 of RuvB-like 1                                                   | EACGVIVELIK                    |
| IPI00219078 | Isoform 1 of Sarcoplasmic/endoplasmic reticulum calcium ATPase 2           | NYLEPGKECVQPATK                |
|             |                                                                            | VGEATETALTCLVEK                |
| IPI00848161 | Isoform 1 of Spliceosome RNA helicase DDX39B                               | CIALAQLLVEQNFPAlAIHR           |
| IPI00100656 | Isoform 1 of Trans-2,3-enoyl-CoA reductase                                 | EKLCLDKVEPHATIAEIK             |
| IPI00797270 | Isoform 1 of Triosephosphate isomerase                                     | VAHALAEGLGVIACIGEK             |
| IPI00027493 | Isoform 2 of 4F2 cell-surface antigen heavy chain                          | WCSWSLSQAR                     |
| IPI00759824 | Isoform 2 of Acidic leucine-rich nuclear phosphoprotein 32 family member B | SLDLFNCEVTNLNDYR               |
| IPI00639931 | Isoform 2 of Adenylyl cyclase-associated protein 1                         | ALLVTASQCQQPAENK               |
| IPI00455383 | Isoform 2 of Clathrin heavy chain 1                                        | VIQCFaETGQVQK                  |
| IPI00302592 | Isoform 2 of Filamin-A                                                     | ALGALVDSCAPGLCPDWDSWDASKPVTNAR |
|             |                                                                            | DGSCGVAYVVQEPGDYEVSVK          |
|             |                                                                            | SPYTVTVGQACNPSACR              |
|             |                                                                            | VTYCPTEPGNYIINIK               |
|             |                                                                            | YWPQEAGEYAVHVLCSNSEDIR         |
| IPI00218211 | Isoform 2 of Hereditary hemochromatosis protein                            | DCPAQLQLLELGR                  |
| IPI00514701 | Isoform 2 of Mitotic checkpoint protein BUB3                               | TPCNAGTFSQPEK                  |
| IPI00978187 | Isoform 2 of NADH dehydrogenase [ubiquinone] flavoprotein 1, mitochondrial | NACGSGYDFDVFVVR                |
| IPI00006196 | Isoform 2 of Nuclear mitotic apparatus protein 1                           | HLCQQLQAEQAAAEK                |
| IPI00376609 | Isoform 2 of Nuclear pore complex protein Nup155                           | CITDTLQELVNQSK                 |
| IPI00218435 | Isoform 2 of U4/U6 small nuclear ribonucleoprotein Prp4                    | LWSVPDCNLLHLTR                 |
| IPI00619903 | Isoform 2 of UDP-glucose:glycoprotein glucosyltransferase 1                | TCESDTLEALLLTASERPKLLFK        |
| IPI00220667 | Isoform 4 of Hexokinase-1                                                  | ATDCVGHdVVTLlR                 |
|             |                                                                            | CNVsFLLSEdGSGK                 |
|             |                                                                            | KLPVGFTFSFPCQqSK               |
| IPI00645867 | Isoform 6 of Myoferlin                                                     | FDTTCKPLASTTQYSR               |
|             |                                                                            | HSATTVFGANTPIVSCNFDR           |
|             |                                                                            | KVCTNIIEK                      |
|             |                                                                            | LDLPNRPETSFLWFTNPCK            |
| IPI00021405 | Isoform A of Prelamin-A/C                                                  | AQNTWGCgNSLR                   |
| IPI00008918 | Isoform Beta of LIM domain and actin-binding protein 1                     | LLANQQVFHISCFR                 |
| IPI00216530 | Isoform K of Plasma membrane calcium-transporting ATPase 1                 | TECALLGLLLDLKR                 |
| IPI00479186 | Isoform M2 of Pyruvate kinase isozymes M1/M2                               | GIFPVLCKDPVQEAWAEVDLR          |
|             |                                                                            | NTGIICTIGPASR                  |
| IPI00022694 | Isoform Rpn10A of 26S proteasome non-ATPase regulatory subunit 4           | LQAQQDAVNIVCHSK                |
| IPI00289800 | Isoform Short of Glucose-6-phosphate 1-dehydrogenase                       | LQFHdVAGDIFHQQCK               |
| IPI00217170 | Isoform ZB of Plasma membrane calcium-transportingATPase                   | TECALLGFVTDLK                  |

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|             | 4                                                                       |                                    |
| IPI00217975 | Lamin-B1                                                                | CKAEHDQLLNRYAK                     |
| IPI00008986 | Large neutral amino acids transporter small subunit 1                   | WLLQGIFSTTVLCQK                    |
| IPI00219217 | L-lactate dehydrogenase B chain                                         | GMYGIEVEVFLSLPCILNAR               |
| IPI00916111 | Malate dehydrogenase, cytoplasmic                                       | VIVVGNPANTNCLTASK                  |
| IPI00217223 | Multifunctional protein ADE2                                            | LPSGLGCSTVLSPEGSAQFAAQIFGLSNHLVWSK |
|             |                                                                         | VVVLMSGTSDLGHCEK                   |
| IPI00026167 | NHP2-like protein 1                                                     | ACGVS RPVIACSVTIK                  |
| IPI00783781 | Nuclear pore complex protein Nup205                                     | TCLHAILNILEK                       |
| IPI00183603 | Oligosaccharyltransferase complex subunit OSTC                          | VPFLVLECPNLK                       |
| IPI00419585 | Peptidyl-prolyl cis-trans isomerase A                                   | KITIADCGQLE                        |
| IPI00219005 | Peptidyl-prolyl cis-trans isomerase FKBP4                               | VGEVCHITCKPEYAYGSAGSPPK            |
| IPI00000874 | Peroxiredoxin-1                                                         | KLNCQVIGASVDSHFCHLAWVNTPK          |
| IPI00011937 | Peroxiredoxin-4                                                         | SINTEVVACSVDSQFTHLAWINTPR          |
|             |                                                                         | TREEECHFYAGGQVYPGEASR              |
| IPI00220301 | Peroxiredoxin-6                                                         | DFTPVCCTELGR                       |
| IPI00169383 | Phosphoglycerate kinase 1                                               | ACANPAAGSVILLENLR                  |
|             |                                                                         | GCITIIGGGDTATCCAK                  |
| IPI00549725 | Phosphoglycerate mutase 1                                               | YADLTEDQLPSCESLK                   |
| IPI00964123 | Phosphoribosylaminoimidazole-succinocarboxamide synthase                | ITSCIFQLLQEAGIK                    |
| IPI00004534 | Phosphoribosylformylglycinamidine synthase                              | HVVFTAETHNFPTGVCPSGATTGTGGR        |
| IPI00642944 | Poly(A) binding protein, cytoplasmic 4 (Inducible form), isoform CRA_e  | ALYDTFSAFGNILSCK                   |
| IPI00016610 | Poly(rC)-binding protein 1                                              | LVVPATQCGSLIGK                     |
| IPI00470509 | poly(rC)-binding protein 2 isoform c                                    | LVVPASQCGSLIGK                     |
| IPI00004669 | Polypeptide N-acetylgalactosaminyltransferase 2                         | HVGSNLCLDSR                        |
|             |                                                                         | SGGLSVEVCGPALSQQWK                 |
| IPI00017334 | Prohibitin                                                              | GVQDIVVGEGTHFLIPWVQKPIIFDCR        |
| IPI00021700 | Proliferating cell nuclear antigen                                      | DLSHIGDAVVISCAK                    |
| IPI00292657 | Prostaglandin reductase 1                                               | IAICGAISTYNR                       |
| IPI00984352 | Protein arginine N-methyltransferase 1                                  | VEDLTFTSPFCLQVK                    |
| IPI00020021 | Protein DEK                                                             | SICEVLDLER                         |
| IPI00298547 | Protein DJ-1                                                            | DVVICPDASLEDAKK                    |
|             |                                                                         | VTVAGLAGKDPVQCSR                   |
| IPI00219306 | Protein mago nashi homolog                                              | CLVFSLIGLHFK                       |
| IPI00941557 | Pyrroline-5-carboxylate reductase 1, mitochondrial                      | SLLINAVEASCIR                      |
| IPI00016342 | Ras-related protein Rab-7a                                              | GADCCVLVFDVTAPNTFK                 |
| IPI00009104 | RuvB-like 2                                                             | FVQCPDGELQK                        |
| IPI00008380 | Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform | NVVTIFSAPNYCYR                     |
| IPI00017963 | Small nuclear ribonucleoprotein Sm D2                                   | NNTQVLINCR                         |
| IPI00019407 | Sterol-4-alpha-carboxylate 3-dehydrogenase,                             | GVNTVFHCASPPSSNNK                  |

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|-------------|---------------------------------------------------|-----------------------|
|             | decarboxylating                                   |                       |
| IPI00010720 | T-complex protein 1 subunit epsilon               | IAILTCPFEPPKPK        |
| IPI00939560 | thioredoxin domain-containing protein 5 isoform 3 | IAEVDCTAER            |
|             |                                                   | VDCTAHSDVCSAQGVR      |
| IPI00022774 | Transitional endoplasmic reticulum ATPase         | GVLFGPPGCGK           |
|             |                                                   | MTNGFSGADLTEICQR      |
| IPI00010427 | Transmembrane protein 93                          | GNAAVLDYCR            |
| IPI00013475 | Tubulin beta-2A chain                             | EIVHIQAGQCQNQIGAK     |
| IPI00645078 | Ubiquitin-like modifier-activating enzyme 1       | DNPGVVTCLDEAR         |
|             |                                                   | YFLVGAGAIGCELLK       |
| IPI00418471 | Vimentin                                          | QVQSLTCEVDALKGTNESLER |
| IPI00007812 | V-type proton ATPase subunit B, brain isoform     | IPIFSAAGLPHNEIAAQICR  |
|             |                                                   | TSCEFTGDILR           |
| IPI00220834 | X-ray repair cross-complementing protein 5        | CFSVLGFCK             |