

**Supplementary Table 6: Proteomic profile of run 2 of the bilateral varicocele group proteins showing peptide number and peptide coverage.**

| <i>No</i> | <i>Protein</i>                       | <i>Accession number</i> | <i>Mass (kDa)</i> | <i>Peptides number</i> | <i>Sequence coverage (%)</i> | <i>Spectral counts</i> |
|-----------|--------------------------------------|-------------------------|-------------------|------------------------|------------------------------|------------------------|
| 1         | semenogelin-2 precursor              | 4506885                 | 65                | 46                     | 70                           | 2324                   |
| 2         | fibronectin isoform 3 preproprotein  | 16933542                | 259               | 145                    | 68                           | 1940                   |
| 3         | semenogelin-1 preproprotein          | 4506883                 | 52                | 64                     | 73                           | 1752                   |
| 4         | A-kinase anchor protein 4 isoform 2  | 21493039                | 93                | 76                     | 80                           | 1589                   |
| 5         | lactotransferrin isoform 1 precursor | 54607120                | 78                | 79                     | 87                           | 1467                   |
| 6         | fibronectin isoform 1 preproprotein  | 47132557                | 272               | 3                      | 68                           | 1422                   |
| 7         | tubulin beta-4B chain                | 5174735                 | 50                | 33                     | 75                           | 1017                   |

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**Supplementary Table 6: Contd...**

| <i>No</i> | <i>Protein</i>  | <i>Accession number</i> | <i>Mass (kDa)</i> | <i>Peptides number</i> | <i>Sequence coverage (%)</i> | <i>Spectral counts</i> |
|-----------|---|-------------------------|-------------------|------------------------|------------------------------|------------------------|
| 8         | actin, cytoplasmic 1  | 4501885                 | 42                | 34                     | 81                           | 863                    |
| 9         | heat shock-related 70 protein 2                                       | 13676857                | 70                | 45                     | 64                           | 835                    |
| 10        | tubulin alpha-3C/D chain  | 17921993                | 50                | 32                     | 68                           | 780                    |
| 11        | keratin, type II cytoskeletal 1                                       | 119395750               | 66                | 38                     | 60                           | 698                    |
| 12        | A-kinase anchor protein 3   | 21493041                | 95                | 52                     | 57                           | 656                    |
| 13        | clusterin preproprotein   | 355594753               | 52                | 30                     | 52                           | 649                    |
| 14        | 78 glucose-regulated protein precursor                                | 16507237                | 72                | 39                     | 54                           | 609                    |
| 15        | keratin, type I cytoskeletal 9  | 55956899                | 62                | 35                     | 58                           | 592                    |
| 16        | pyruvate kinase isozymes M1/M2 isoform c                              | 332164775               | 66                | 41                     | 68                           | 568                    |
| 17        | keratin, type I cytoskeletal 10                                       | 195972866               | 59                | 33                     | 55                           | 540                    |
| 18        | myosin-9  | 12667788                | 227               | 103                    | 51                           | 533                    |
| 19        | heat shock protein HSP 90-alpha isoform 1                             | 153792590               | 98                | 46                     | 47                           | 532                    |
| 20        | heat shock cognate 71 protein isoform 1                               | 5729877                 | 71                | 20                     | 50                           | 527                    |
| 21        | endoplasmic precursor   | 4507677                 | 92                | 51                     | 62                           | 515                    |
| 22        | prostatic acid phosphatase isoform TM-PAP precursor                   | 197116348               | 48                | 22                     | 46                           | 507                    |
| 23        | keratin, type II cytoskeletal 2 epidermal                             | 47132620                | 65                | 35                     | 73                           | 501                    |
| 24        | heat shock 70 protein 1A/1B   | 194248072               | 70                | 18                     | 59                           | 438                    |
| 25        | heat shock protein HSP 90-beta  | 20149594                | 83                | 24                     | 46                           | 432                    |
| 26        | ATP synthase subunit beta, mitochondrial precursor                    | 32189394                | 57                | 27                     | 75                           | 432                    |
| 27        | tubulin beta-4A chain   | 21361322                | 50                | 2                      | 60                           | 427                    |
| 28        | glyceraldehyde-3-phosphate dehydrogenase, testis-specific             | 7657116                 | 45                | 21                     | 77                           | 419                    |
| 29        | heat shock 70 protein 1-like  | 124256496               | 70                | 22                     | 51                           | 404                    |
| 30        | tubulin alpha-1A chain  | 17986283                | 50                | 2                      | 58                           | 398                    |
| 31        | outer dense fiber protein 2 isoform 3                                 | 310750406               | 81                | 32                     | 39                           | 388                    |
| 32        | fatty acid synthase   | 41872631                | 273               | 57                     | 26                           | 382                    |
| 33        | protein disulfide-isomerase A3 precursor                              | 21361657                | 57                | 37                     | 70                           | 366                    |
| 34        | alpha-enolase isoform 1   | 4503571                 | 47                | 36                     | 77                           | 365                    |
| 35        | annexin A6 isoform 1  | 71773329                | 76                | 42                     | 65                           | 345                    |
| 36        | tubulin beta-3 chain isoform 1  | 50592996                | 50                | 2                      | 32                           | 337                    |
| 37        | fructose-bisphosphate aldolase A isoform 2                            | 342187211               | 45                | 37                     | 77                           | 336                    |
| 38        | elongation factor 1-alpha 1   | 4503471                 | 50                | 25                     | 59                           | 320                    |
| 39        | protein-glutamine gamma-glutamyltransferase 4                         | 156627577               | 77                | 35                     | 50                           | 306                    |
| 40        | annexin A5  | 4502107                 | 36                | 29                     | 81                           | 290                    |
| 41        | tubulin beta chain  | 29788785                | 50                | 4                      | 66                           | 288                    |
| 42        | dipeptidyl peptidase 4  | 18765694                | 88                | 38                     | 55                           | 288                    |
| 43        | calcium-binding tyrosine phosphorylation- regulated protein isoform c | 24797112                | 41                | 23                     | 66                           | 282                    |
| 44        | annexin A2 isoform 1  | 50845388                | 40                | 32                     | 66                           | 281                    |
| 45        | aminopeptidase N precursor  | 157266300               | 110               | 53                     | 55                           | 276                    |
| 46        | annexin A1  | 4502101                 | 39                | 25                     | 66                           | 266                    |
| 47        | pyruvate kinase isozymes M1/M2 isoform a                              | 33286418                | 58                | 2                      | 72                           | 262                    |
| 48        | triosephosphate isomerase isoform 2                                   | 226529917               | 31                | 26                     | 86                           | 261                    |
| 49        | calcium-binding tyrosine phosphorylation- regulated protein isoform a | 24797108                | 53                | 7                      | 47                           | 260                    |
| 50        | ropporin-1A   | 21359920                | 24                | 15                     | 69                           | 257                    |
| 51        | plastin-2   | 167614506               | 70                | 35                     | 64                           | 256                    |
| 52        | creatine kinase B-type  | 21536286                | 43                | 18                     | 68                           | 251                    |
| 53        | heat shock protein beta-1   | 4504517                 | 23                | 21                     | 90                           | 250                    |
| 54        | prolactin-inducible protein precursor                                 | 4505821                 | 17                | 13                     | 71                           | 248                    |
| 55        | tubulin alpha-1C chain  | 14389309                | 50                | 2                      | 54                           | 221                    |
| 56        | prostate-specific antigen isoform 1 preproprotein                     | 4502173                 | 29                | 13                     | 65                           | 205                    |
| 57        | ATP synthase subunit alpha, mitochondrial precursor                   | 4757810                 | 60                | 26                     | 55                           | 203                    |
| 58        | phosphoglycerate kinase 2   | 31543397                | 45                | 24                     | 72                           | 200                    |
| 59        | hypoxia up-regulated protein 1 precursor                              | 5453832                 | 111               | 37                     | 46                           | 193                    |
| 60        | ruvB-like 2   | 5730023                 | 51                | 25                     | 63                           | 189                    |

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Supplementary Table 6: Contd...

| No  | Protein  | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|--|------------------|------------|-----------------|-----------------------|-----------------|
| 61  | T-complex protein 1 subunit beta isoform 1   | 5453603          | 57         | 31              | 69                    | 187             |
| 62  | glyceraldehyde-3-phosphate dehydrogenase   | 7669492          | 36         | 17              | 69                    | 184             |
| 63  | fumarate hydratase, mitochondrial  | 19743875         | 55         | 23              | 59                    | 183             |
| 64  | ropporin-1B  | 59891409         | 24         | 3               | 68                    | 182             |
| 65  | keratin, type I cytoskeletal 14  | 15431310         | 52         | 10              | 33                    | 182             |
| 66  | keratin, type II cytoskeletal 5  | 119395754        | 62         | 19              | 33                    | 179             |
| 67  | nuclear pore membrane glycoprotein 210-like isoform 1 precursor                      | 117414168        | 211        | 51              | 37                    | 174             |
| 68  | 60 heat shock protein, mitochondrial   | 31542947         | 61         | 27              | 69                    | 170             |
| 69  | protein disulfide-isomerase precursor  | 20070125         | 57         | 26              | 56                    | 168             |
| 70  | sorbitol dehydrogenase   | 156627571        | 38         | 15              | 59                    | 166             |
| 71  | malate dehydrogenase, mitochondrial precursor  | 21735621         | 36         | 20              | 68                    | 166             |
| 72  | uncharacterized protein C1orf56 precursor  | 20149646         | 37         | 13              | 48                    | 158             |
| 73  | myeloperoxidase precursor  | 4557759          | 84         | 36              | 43                    | 152             |
| 74  | tektin-3   | 13994250         | 57         | 19              | 46                    | 147             |
| 75  | ruvB-like 1  | 4506753          | 50         | 20              | 57                    | 147             |
| 76  | serum albumin preproprotein  | 4502027          | 69         | 31              | 57                    | 144             |
| 77  | elongation factor 2  | 4503483          | 95         | 31              | 44                    | 141             |
| 78  | acetyl-CoA acetyltransferase, mitochondrial precursor                                | 4557237          | 45         | 21              | 54                    | 140             |
| 79  | calreticulin precursor   | 4757900          | 48         | 21              | 61                    | 139             |
| 80  | T-complex protein 1 subunit theta  | 48762932         | 60         | 26              | 52                    | 130             |
| 81  | cysteine-rich secretory protein 1 isoform 1 precursor                                | 327315372        | 28         | 11              | 57                    | 129             |
| 82  | cathelicidin antimicrobial peptide preproprotein                                     | 348041314        | 20         | 12              | 51                    | 126             |
| 83  | zona pellucida-binding protein 1 isoform 1 precursor                                 | 229577313        | 40         | 14              | 45                    | 125             |
| 84  | T-complex protein 1 subunit delta  | 38455427         | 58         | 17              | 42                    | 123             |
| 85  | neutral alpha-glucosidase AB isoform 2 precursor                                     | 38202257         | 107        | 26              | 35                    | 122             |
| 86  | lipoprotein lipase precursor   | 4557727          | 53         | 18              | 38                    | 122             |
| 87  | leucine-rich repeat-containing protein 37B precursor                                 | 53829385         | 106        | 23              | 23                    | 121             |
| 88  | keratin, type I cytoskeletal 16  | 24430192         | 51         | 10              | 38                    | 121             |
| 89  | clathrin heavy chain 1   | 4758012          | 192        | 33              | 25                    | 119             |
| 90  | angiotensin-converting enzyme isoform 1 precursor                                    | 4503273          | 150        | 28              | 26                    | 119             |
| 91  | sperm acrosome membrane-associated protein 1 precursor                               | 13569934         | 32         | 9               | 44                    | 119             |
| 92  | 14-3-3 protein epsilon   | 5803225          | 29         | 25              | 74                    | 118             |
| 93  | glutathione S-transferase Mu 3   | 23065552         | 27         | 19              | 76                    | 117             |
| 94  | calnexin precursor   | 10716563         | 68         | 24              | 47                    | 117             |
| 95  | peroxiredoxin-6  | 4758638          | 25         | 17              | 78                    | 116             |
| 96  | peroxiredoxin-1  | 320461711        | 22         | 15              | 75                    | 115             |
| 97  | phospholipid hydroperoxide glutathione peroxidase, mitochondrial isoform A precursor | 75709200         | 22         | 15              | 58                    | 114             |
| 98  | gastricsin isoform 1 preproprotein   | 4505757          | 42         | 5               | 12                    | 114             |
| 99  | tektin-2   | 16507950         | 50         | 20              | 58                    | 114             |
| 100 | hexokinase-1 isoform HKI-ta/tb   | 15991831         | 103        | 27              | 30                    | 113             |
| 101 | cytosolic non-specific dipeptidase isoform 1   | 271398239        | 53         | 22              | 57                    | 113             |
| 102 | keratin, type II cytoskeletal 6A   | 5031839          | 60         | 10              | 26                    | 112             |
| 103 | acrosin-binding protein precursor  | 17999524         | 61         | 18              | 40                    | 111             |
| 104 | sperm protein associated with the nucleus on the X chromosome C                      | 13435137         | 11         | 8               | 86                    | 110             |
| 105 | filamin-B isoform 2  | 105990514        | 278        | 41              | 23                    | 110             |
| 106 | 14-3-3 protein zeta/delta  | 4507953          | 28         | 14              | 67                    | 109             |
| 107 | transitional endoplasmic reticulum ATPase  | 6005942          | 89         | 24              | 40                    | 108             |
| 108 | long-chain-fatty-acid--CoA ligase 1  | 40807491         | 78         | 22              | 39                    | 108             |
| 109 | T-complex protein 1 subunit gamma isoform a  | 63162572         | 61         | 22              | 50                    | 107             |
| 110 | matrix-remodeling-associated protein 5 precursor                                     | 139948432        | 312        | 33              | 13                    | 107             |
| 111 | laminin subunit beta-2 precursor   | 119703755        | 196        | 33              | 26                    | 105             |
| 112 | saccharopine dehydrogenase-like oxidoreductase                                       | 55770836         | 47         | 14              | 54                    | 104             |
| 113 | elongation factor 1-gamma  | 4503481          | 50         | 15              | 45                    | 102             |
| 114 | L-lactate dehydrogenase C chain  | 4504973          | 36         | 16              | 52                    | 101             |
| 115 | T-complex protein 1 subunit epsilon  | 24307939         | 60         | 20              | 47                    | 99              |

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| No  | Protein   | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|---|------------------|------------|-----------------|-----------------------|-----------------|
| 116 | D-3-phosphoglycerate dehydrogenase  | 23308577         | 57         | 12              | 31                    | 99              |
| 117 | myosin-10   | 41406064         | 229        | 23              | 22                    | 99              |
| 118 | keratin, type I cytoskeletal 13 isoform a   | 131412225        | 50         | 18              | 47                    | 99              |
| 119 | erlin-2 isoform 1   | 6005721          | 38         | 18              | 54                    | 95              |
| 120 | ras-related protein Rab-2A isoform a  | 4506365          | 24         | 15              | 73                    | 94              |
| 121 | succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial            | 156416003        | 73         | 21              | 43                    | 94              |
| 122 | T-complex protein 1 subunit eta isoform a   | 5453607          | 59         | 18              | 42                    | 94              |
| 123 | pyruvate dehydrogenase E1 component subunit beta, mitochondrial isoform 1 precursor | 156564403        | 39         | 14              | 48                    | 91              |
| 124 | T-complex protein 1 subunit alpha isoform a   | 57863257         | 60         | 19              | 39                    | 90              |
| 125 | cytochrome c oxidase subunit 4 isoform 1, mitochondrial precursor                   | 4502981          | 20         | 16              | 54                    | 90              |
| 126 | 14-3-3 protein sigma  | 5454052          | 28         | 11              | 58                    | 90              |
| 127 | aconitate hydratase, mitochondrial precursor  | 4501867          | 85         | 16              | 29                    | 88              |
| 128 | radial spoke head protein 6 homolog A   | 13540559         | 81         | 15              | 37                    | 87              |
| 129 | cytochrome b-c1 complex subunit 2, mitochondrial precursor                          | 50592988         | 48         | 16              | 44                    | 86              |
| 130 | protein FAM166A   | 48717426         | 36         | 15              | 49                    | 86              |
| 131 | uncharacterized protein KIAA1683 isoform a  | 224451032        | 147        | 23              | 19                    | 85              |
| 132 | laminin subunit alpha-5 precursor   | 21264602         | 400        | 35              | 13                    | 85              |
| 133 | trifunctional enzyme subunit alpha, mitochondrial precursor                         | 20127408         | 83         | 18              | 28                    | 85              |
| 134 | sperm protein associated with the nucleus on the X chromosome B/F                   | 22027492         | 12         | 6               | 79                    | 84              |
| 135 | isocitrate dehydrogenase [NADP] cytoplasmic   | 28178825         | 47         | 16              | 40                    | 83              |
| 136 | dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 1 precursor  | 4506675          | 69         | 21              | 44                    | 81              |
| 137 | valyl-tRNA synthetase   | 5454158          | 140        | 21              | 23                    | 79              |
| 138 | ezrin   | 21614499         | 69         | 14              | 30                    | 78              |
| 139 | izumo sperm-egg fusion protein 4 isoform 1 precursor                                | 89903025         | 24         | 7               | 50                    | 78              |
| 140 | leucine-rich repeat-containing protein 37A precursor                                | 289547512        | 188        | 15              | 6.80                  | 77              |
| 141 | annexin A3  | 4826643          | 36         | 17              | 48                    | 77              |
| 142 | cytochrome c oxidase subunit 5A, mitochondrial precursor                            | 190885499        | 17         | 10              | 67                    | 77              |
| 143 | adipocyte plasma membrane-associated protein  | 24308201         | 46         | 17              | 51                    | 76              |
| 144 | trifunctional enzyme subunit beta, mitochondrial precursor                          | 4504327          | 51         | 17              | 44                    | 75              |
| 145 | phosphoglycerate kinase 1   | 4505763          | 45         | 11              | 46                    | 75              |
| 146 | carboxypeptidase Z isoform 2 precursor  | 62388875         | 73         | 17              | 37                    | 73              |
| 147 | myosin light polypeptide 6 isoform 2  | 88999583         | 17         | 10              | 76                    | 70              |
| 148 | cytosol aminopeptidase  | 41393561         | 56         | 22              | 52                    | 70              |
| 149 | sperm protein associated with the nucleus on the X chromosome E                     | 22027496         | 11         | 2               | 86                    | 69              |
| 150 | radial spoke head 1 homolog   | 18254456         | 35         | 11              | 51                    | 69              |
| 151 | annexin A4  | 4502105          | 36         | 17              | 50                    | 69              |
| 152 | dihydrolipoyl dehydrogenase, mitochondrial precursor                                | 91199540         | 54         | 16              | 45                    | 68              |
| 153 | 6-phosphofructokinase type C isoform 1  | 11321601         | 86         | 21              | 34                    | 68              |
| 154 | epididymal sperm-binding protein 1 precursor  | 301601648        | 26         | 8               | 42                    | 67              |
| 155 | mitochondrial inner membrane protein isoform 3                                      | 154354966        | 83         | 21              | 35                    | 67              |
| 156 | protein S100-A9   | 4506773          | 13         | 11              | 82                    | 67              |
| 157 | T-complex protein 1 subunit zeta isoform a  | 4502643          | 58         | 14              | 34                    | 66              |
| 158 | glutamine synthetase  | 19923206         | 42         | 13              | 34                    | 66              |
| 159 | glutathione S-transferase P   | 4504183          | 23         | 9               | 56                    | 65              |
| 160 | dynein light chain 1, cytoplasmic   | 4505813          | 10         | 8               | 65                    | 65              |
| 161 | 14-3-3 protein theta  | 5803227          | 28         | 7               | 43                    | 64              |
| 162 | laminin subunit gamma-1 precursor   | 145309326        | 178        | 24              | 21                    | 64              |
| 163 | cytoskeleton-associated protein 4   | 19920317         | 66         | 16              | 30                    | 64              |
| 164 | alcohol dehydrogenase [NADP+]   | 24497577         | 37         | 10              | 35                    | 63              |
| 165 | myeloid leukemia factor 1 isoform 1   | 11967975         | 31         | 11              | 60                    | 63              |
| 166 | plasma serine protease inhibitor precursor  | 194018472        | 46         | 13              | 32                    | 63              |
| 167 | vesicular integral-membrane protein VIP36 precursor                                 | 5803023          | 40         | 13              | 50                    | 63              |
| 168 | peptidyl-prolyl cis-trans isomerase A   | 10863927         | 18         | 11              | 71                    | 62              |
| 169 | peroxiredoxin-5, mitochondrial isoform a precursor                                  | 6912238          | 22         | 10              | 56                    | 62              |

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| No  | Protein  | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|--|------------------|------------|-----------------|-----------------------|-----------------|
| 170 | ubiquitin-like modifier-activating enzyme 1  | 23510340         | 118        | 15              | 15                    | 61              |
| 171 | peroxiredoxin-2 isoform a  | 32189392         | 22         | 10              | 34                    | 61              |
| 172 | alpha-actinin-4  | 12025678         | 105        | 20              | 26                    | 60              |
| 173 | keratin, type II cytoskeletal 6B   | 119703753        | 60         | 3               | 29                    | 60              |
| 174 | serum amyloid P-component precursor  | 4502133          | 25         | 8               | 33                    | 60              |
| 175 | cAMP-dependent protein kinase type II-alpha regulatory subunit   | 4758958          | 46         | 17              | 51                    | 60              |
| 176 | agrin precursor  | 54873613         | 215        | 26              | 18                    | 59              |
| 177 | azurocidin preproprotein   | 11342670         | 27         | 10              | 59                    | 59              |
| 178 | dipeptidase 3 isoform a precursor  | 193211608        | 56         | 14              | 36                    | 59              |
| 179 | protein phosphatase 1 regulatory subunit 7   | 4506013          | 42         | 13              | 43                    | 59              |
| 180 | histone H2B type 1-A   | 24586679         | 14         | 6               | 41                    | 58              |
| 181 | ferritin, mitochondrial precursor  | 29126241         | 28         | 14              | 64                    | 58              |
| 182 | plastin-3 isoform 1  | 209862851        | 71         | 6               | 21                    | 58              |
| 183 | olfactomedin-4 precursor   | 32313593         | 57         | 12              | 37                    | 55              |
| 184 | tektin-4   | 21389613         | 51         | 14              | 34                    | 55              |
| 185 | L-asparaginase   | 145275200        | 32         | 12              | 56                    | 54              |
| 186 | alpha-centractin   | 5031569          | 43         | 11              | 49                    | 54              |
| 187 | protein disulfide-isomerase A6 precursor   | 5031973          | 48         | 12              | 39                    | 54              |
| 188 | dolichyl-diphosphooligosaccharide-protein glycosyltransferase subunit 2 isoform 2 precursor                        | 209413738        | 68         | 13              | 38                    | 53              |
| 189 | cytoplasmic dynein 1 heavy chain 1   | 33350932         | 532        | 27              | 6.30                  | 52              |
| 190 | peroxiredoxin-4 precursor  | 5453549          | 31         | 13              | 57                    | 52              |
| 191 | dynein light chain 2, cytoplasmic  | 18087855         | 10         | 5               | 65                    | 52              |
| 192 | protein FAM71B   | 222418633        | 65         | 11              | 16                    | 52              |
| 193 | nephrilysin  | 116256329        | 86         | 17              | 30                    | 52              |
| 194 | protein NDRG1  | 37655183         | 43         | 8               | 34                    | 51              |
| 195 | acrosin precursor  | 148613878        | 46         | 12              | 36                    | 51              |
| 196 | cytochrome c oxidase subunit 5B, mitochondrial precursor   | 17017988         | 14         | 12              | 51                    | 51              |
| 197 | dihydrolipoyllysine-residue acetyltransferase component of pyruvate dehydrogenase complex, mitochondrial precursor | 31711992         | 69         | 12              | 25                    | 50              |
| 198 | acrosomal protein SP-10 isoform a precursor  | 4501879          | 28         | 7               | 24                    | 50              |
| 199 | histone H4   | 4504303          | 11         | 8               | 52                    | 49              |
| 200 | 26S protease regulatory subunit 8 isoform 1  | 24497435         | 46         | 9               | 33                    | 49              |
| 201 | serpin B6  | 41152086         | 43         | 16              | 59                    | 49              |
| 202 | maltase-glucoamylase, intestinal   | 221316699        | 210        | 21              | 16                    | 49              |
| 203 | carboxypeptidase E preproprotein   | 4503009          | 53         | 7               | 13                    | 49              |
| 204 | cofilin-1  | 5031635          | 19         | 8               | 63                    | 48              |
| 205 | ubiquitin-40S ribosomal protein S27a precursor   | 208022622        | 18         | 5               | 54                    | 48              |
| 206 | voltage-dependent anion-selective channel protein 2 isoform 2  | 296317339        | 32         | 11              | 49                    | 48              |
| 207 | nucleobindin-2 precursor   | 4826870          | 50         | 13              | 41                    | 48              |
| 208 | elongation factor 1-delta isoform 1  | 304555581        | 71         | 7               | 14                    | 47              |
| 209 | cAMP-dependent protein kinase type I-alpha regulatory subunit  | 4506063          | 43         | 11              | 34                    | 47              |
| 210 | adenylate kinase isoenzyme 1   | 4502011          | 22         | 7               | 46                    | 47              |
| 211 | collagen alpha-1(XVIII) chain isoform 1 precursor  | 110611235        | 154        | 14              | 16                    | 47              |
| 212 | lipid phosphate phosphohydrolase 1 isoform 1   | 29171736         | 32         | 4               | 21                    | 47              |
| 213 | 2,4-dienoyl-CoA reductase, mitochondrial precursor   | 4503301          | 36         | 11              | 48                    | 47              |
| 214 | glypican-1 precursor   | 167001141        | 62         | 12              | 31                    | 47              |
| 215 | voltage-dependent anion-selective channel protein 3 isoform 1  | 25188179         | 31         | 11              | 39                    | 47              |
| 216 | T-complex protein 1 subunit zeta-2 isoform 1   | 58331173         | 58         | 6               | 30                    | 47              |
| 217 | neutrophil defensin 3 preproprotein  | 4885179          | 10         | 6               | 27                    | 46              |
| 218 | hyaluronidase PH-20 isoform 2  | 291290981        | 58         | 7               | 15                    | 46              |
| 219 | myosin-14 isoform 3  | 224831241        | 232        | 15              | 13                    | 45              |
| 220 | CD177 antigen precursor  | 110735433        | 46         | 9               | 36                    | 45              |
| 221 | carbonyl reductase [NADPH] 1   | 4502599          | 30         | 9               | 39                    | 44              |
| 222 | L-xylulose reductase isoform 1   | 7705925          | 26         | 9               | 53                    | 44              |
| 223 | radial spoke head protein 9 homolog isoform 1  | 32964825         | 31         | 15              | 65                    | 44              |
| 224 | profilin-1   | 4826898          | 15         | 9               | 66                    | 44              |
| 225 | aldose reductase   | 4502049          | 36         | 11              | 41                    | 44              |

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Supplementary Table 6: Contd...

| No  | Protein  | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|--|------------------|------------|-----------------|-----------------------|-----------------|
| 226 | glycogen phosphorylase, brain form   | 21361370         | 97         | 9               | 10                    | 44              |
| 227 | protein disulfide-isomerase A4 precursor   | 4758304          | 73         | 14              | 26                    | 44              |
| 228 | protein S100-A8  | 21614544         | 11         | 9               | 55                    | 43              |
| 229 | glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 isoform 1   | 347659028        | 79         | 14              | 24                    | 43              |
| 230 | sperm equatorial segment protein 1 precursor   | 21717832         | 39         | 5               | 19                    | 43              |
| 231 | mitochondrial carrier homolog 2  | 7657347          | 33         | 11              | 50                    | 43              |
| 232 | keratin, type II cytoskeletal 4  | 331999954        | 56         | 14              | 41                    | 43              |
| 233 | transmembrane protease serine 2 isoform 2  | 205360943        | 54         | 7               | 11                    | 43              |
| 234 | cytochrome b-c1 complex subunit 1, mitochondrial precursor   | 46593007         | 53         | 10              | 24                    | 42              |
| 235 | cytochrome c oxidase subunit II  | 251831110        | 26         | 7               | 48                    | 41              |
| 236 | nuclear pore complex protein Nup155 isoform 1  | 24430149         | 155        | 14              | 14                    | 41              |
| 237 | actin-related protein T2   | 29893808         | 42         | 10              | 37                    | 40              |
| 238 | carbonic anhydrase 4 precursor   | 4502519          | 35         | 7               | 25                    | 40              |
| 239 | sperm acrosome membrane-associated protein 3   | 27777653         | 23         | 8               | 33                    | 40              |
| 240 | vesicle-associated membrane protein- associated protein A isoform 2  | 94721252         | 28         | 8               | 38                    | 40              |
| 241 | stress-70 protein, mitochondrial precursor   | 24234688         | 74         | 8               | 16                    | 40              |
| 242 | keratin, type II cuticular Hb3   | 169790841        | 54         | 10              | 14                    | 40              |
| 243 | anterior gradient protein 2 homolog precursor  | 5453541          | 20         | 7               | 53                    | 39              |
| 244 | protein dpy-19 homolog 2   | 93277105         | 87         | 11              | 18                    | 39              |
| 245 | tektin-1   | 16753231         | 48         | 12              | 36                    | 39              |
| 246 | peptidyl-prolyl cis-trans isomerase B precursor  | 4758950          | 24         | 11              | 54                    | 38              |
| 247 | ATP synthase subunit O, mitochondrial precursor  | 4502303          | 23         | 7               | 42                    | 38              |
| 248 | ras GTPase-activating-like protein IQGAP1  | 4506787          | 189        | 13              | 11                    | 38              |
| 249 | sodium/potassium-transporting ATPase subunit beta-3  | 4502281          | 32         | 7               | 34                    | 38              |
| 250 | importin subunit beta-1  | 19923142         | 97         | 10              | 15                    | 38              |
| 251 | single-stranded DNA-binding protein, mitochondrial precursor   | 4507231          | 17         | 9               | 59                    | 37              |
| 252 | L-lactate dehydrogenase A chain isoform 3  | 260099723        | 40         | 7               | 23                    | 36              |
| 253 | fructose-bisphosphate aldolase C   | 4885063          | 39         | 2               | 21                    | 36              |
| 254 | chloride intracellular channel protein 1   | 14251209         | 27         | 8               | 38                    | 36              |
| 255 | 26S protease regulatory subunit 10B  | 195539395        | 46         | 9               | 34                    | 36              |
| 256 | 26S protease regulatory subunit 4  | 24430151         | 49         | 9               | 25                    | 35              |
| 257 | 26S proteasome non-ATPase regulatory subunit 13 isoform 1  | 157502193        | 43         | 12              | 40                    | 35              |
| 258 | beta-2-microglobulin precursor   | 4757826          | 14         | 4               | 38                    | 35              |
| 259 | dolichyl-diphosphooligosaccharide--protein glycosyltransferase 48 subunit precursor  | 20070197         | 51         | 11              | 40                    | 35              |
| 260 | succinyl-CoA: 3-ketoacid-coenzyme A transferase 1, mitochondrial precursor   | 4557817          | 56         | 12              | 35                    | 35              |
| 261 | NADH-ubiquinone oxidoreductase 75 subunit, mitochondrial isoform 1   | 33519475         | 79         | 10              | 22                    | 35              |
| 262 | integrin alpha-M isoform 1 precursor   | 224831239        | 127        | 16              | 19                    | 35              |
| 263 | mucin-6 precursor  | 151301154        | 257        | 14              | 8.50                  | 35              |
| 264 | citrate synthase, mitochondrial precursor  | 38327625         | 52         | 13              | 38                    | 34              |
| 265 | histone H2B type 1-M   | 4504263          | 14         | 3               | 41                    | 34              |
| 266 | glucose-6-phosphate isomerase isoform 2  | 18201905         | 63         | 11              | 29                    | 34              |
| 267 | 3-hydroxyisobutyrate dehydrogenase, mitochondrial precursor  | 23308751         | 35         | 7               | 33                    | 34              |
| 268 | extracellular matrix protein 1 isoform 3 precursor   | 322302700        | 64         | 10              | 19                    | 34              |
| 269 | keratin, type I cytoskeletal 17  | 4557701          | 48         | 2               | 16                    | 34              |
| 270 | alpha-actinin-1 isoform c  | 194097352        | 103        | 7               | 22                    | 33              |
| 271 | dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex, mitochondrial isoform 1 precursor | 19923748         | 49         | 10              | 35                    | 33              |
| 272 | sperm surface protein Sp17   | 8394343          | 17         | 6               | 64                    | 32              |
| 273 | flavin reductase (NADPH)   | 4502419          | 22         | 5               | 35                    | 32              |
| 274 | 26S protease regulatory subunit 6A   | 21361144         | 49         | 10              | 24                    | 32              |
| 275 | 26S protease regulatory subunit 6B isoform 1   | 5729991          | 47         | 7               | 25                    | 32              |
| 276 | prohibitin   | 4505773          | 30         | 10              | 52                    | 32              |
| 277 | radial spoke head protein 3 homolog  | 31543559         | 64         | 8               | 20                    | 32              |
| 278 | uncharacterized protein C20orf106 precursor  | 71043622         | 20         | 6               | 51                    | 32              |
| 279 | ATP synthase subunit d, mitochondrial isoform a  | 5453559          | 18         | 6               | 46                    | 32              |
| 280 | T-complex protein 11 homolog isoform 1   | 148226214        | 57         | 11              | 33                    | 32              |

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**Supplementary Table 6: Contd...**

| No  | Protein   | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|---|------------------|------------|-----------------|-----------------------|-----------------|
| 281 | proteasome subunit alpha type-1 isoform 1                                       | 23110935         | 30         | 11              | 45                    | 32              |
| 282 | erlin-1   | 154800487        | 39         | 7               | 38                    | 32              |
| 283 | beta-enolase isoform 2  | 301897479        | 42         | 2               | 21                    | 32              |
| 284 | endoplasmic reticulum resident protein 29 isoform 1 precursor                   | 5803013          | 29         | 10              | 55                    | 31              |
| 285 | heat shock 70 protein 4L  | 31541941         | 95         | 11              | 13                    | 31              |
| 286 | transmembrane emp24 domain-containing protein 9 precursor                       | 39725636         | 27         | 7               | 31                    | 31              |
| 287 | integrin beta-2 precursor   | 89191865         | 85         | 12              | 18                    | 31              |
| 288 | endoplasmic reticulum resident protein 44 precursor                             | 52487191         | 47         | 11              | 38                    | 31              |
| 289 | reticulocalbin-2 precursor  | 4506457          | 37         | 10              | 38                    | 31              |
| 290 | dynactin subunit 2  | 5453629          | 45         | 8               | 24                    | 31              |
| 291 | NADH dehydrogenase [ubiquinone] iron-sulfur protein 3, mitochondrial precursor  | 4758788          | 30         | 11              | 41                    | 30              |
| 292 | 14-3-3 protein beta/alpha   | 21328448         | 28         | 3               | 31                    | 30              |
| 293 | myosin regulatory light chain 12B   | 15809016         | 20         | 9               | 68                    | 30              |
| 294 | 26S proteasome non-ATPase regulatory subunit 7                                  | 25777615         | 37         | 8               | 39                    | 30              |
| 295 | glutathione reductase, mitochondrial isoform 1 precursor                        | 50301238         | 56         | 13              | 45                    | 30              |
| 296 | G-protein coupled receptor 64 isoform 2 precursor                               | 119943116        | 110        | 7               | 10.00                 | 30              |
| 297 | interferon-inducible GTPase 5   | 10257429         | 50         | 12              | 39                    | 30              |
| 298 | lysozyme C precursor  | 4557894          | 17         | 8               | 57                    | 30              |
| 299 | sperm-associated antigen 6 isoform 1  | 6912678          | 55         | 10              | 34                    | 30              |
| 300 | slit homolog 2 protein precursor  | 4759146          | 170        | 11              | 11                    | 30              |
| 301 | medium-chain specific acyl-CoA dehydrogenase, mitochondrial isoform b precursor | 187960098        | 47         | 11              | 33                    | 30              |
| 302 | hsc70-interacting protein   | 19923193         | 41         | 5               | 15                    | 29              |
| 303 | erythrocyte band 7 integral membrane protein isoform a                          | 38016911         | 32         | 8               | 36                    | 29              |
| 304 | nucleoside diphosphate kinase homolog 5   | 4505413          | 24         | 7               | 52                    | 28              |
| 305 | calmodulin  | 58218968         | 17         | 10              | 46                    | 28              |
| 306 | 6-phosphogluconate dehydrogenase, decarboxylating                               | 40068518         | 53         | 11              | 25                    | 28              |
| 307 | heme oxygenase 2  | 8051608          | 36         | 7               | 34                    | 28              |
| 308 | keratin, type II cytoskeletal 1b  | 194018511        | 62         | 3               | 10                    | 28              |
| 309 | alpha-crystallin B chain  | 4503057          | 20         | 8               | 44                    | 27              |
| 310 | 26S proteasome non-ATPase regulatory subunit 11                                 | 28872725         | 47         | 7               | 16                    | 27              |
| 311 | 60S acidic ribosomal protein P0   | 16933546         | 34         | 8               | 39                    | 27              |
| 312 | tubulin beta-6 chain  | 14210536         | 50         | 2               | 19                    | 27              |
| 313 | ATP synthase subunit b, mitochondrial precursor                                 | 21361565         | 29         | 7               | 36                    | 27              |
| 314 | isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial precursor           | 5031777          | 40         | 9               | 31                    | 27              |
| 315 | peptidyl-prolyl cis-trans isomerase FKBP4                                       | 4503729          | 52         | 11              | 31                    | 27              |
| 316 | eukaryotic translation initiation factor 5A-1 isoform B                         | 219555712        | 17         | 5               | 36                    | 27              |
| 317 | protein S100-A11  | 5032057          | 12         | 7               | 56                    | 27              |
| 318 | tripeptidyl-peptidase 2   | 186972143        | 138        | 11              | 14                    | 27              |
| 319 | 14-3-3 protein gamma  | 21464101         | 28         | 3               | 26                    | 27              |
| 320 | acid ceramidase isoform b   | 189011546        | 47         | 7               | 14                    | 27              |
| 321 | sodium/potassium-transporting ATPase subunit alpha-4 isoform 1                  | 153946397        | 114        | 11              | 15                    | 27              |
| 322 | electron transfer flavoprotein subunit beta isoform 1                           | 4503609          | 28         | 8               | 34                    | 27              |
| 323 | synaptophysin-like protein 1 isoform a  | 5803185          | 29         | 5               | 30                    | 27              |
| 324 | ras-related protein Rab-11B   | 190358517        | 24         | 7               | 41                    | 26              |
| 325 | transmembrane emp24 domain-containing protein 10 precursor                      | 98986464         | 25         | 8               | 29                    | 26              |
| 326 | ribose-phosphate pyrophosphokinase 2 isoform 2                                  | 4506129          | 35         | 6               | 25                    | 26              |
| 327 | epididymal secretory protein E3-beta precursor                                  | 11641279         | 18         | 5               | 35                    | 26              |
| 328 | proteasome subunit alpha type-5 isoform 1                                       | 23110942         | 26         | 9               | 52                    | 26              |
| 329 | electron transfer flavoprotein subunit alpha, mitochondrial isoform a           | 4503607          | 35         | 9               | 44                    | 26              |
| 330 | keratin, type I cytoskeletal 19   | 24234699         | 44         | 5               | 28                    | 26              |
| 331 | mitochondria-eating protein   | 21687119         | 61         | 6               | 16                    | 26              |
| 332 | ribonuclease inhibitor  | 42822872         | 50         | 7               | 17                    | 26              |
| 333 | phosphatidylethanolamine-binding protein 1 preproprotein                        | 4505621          | 21         | 6               | 57                    | 26              |
| 334 | coiled-coil domain-containing protein 19, mitochondrial precursor               | 81295816         | 66         | 9               | 20                    | 26              |
| 335 | dynein heavy chain 17, axonemal   | 256542310        | 509        | 12              | 4.70                  | 26              |
| 336 | uncharacterized protein C7orf61   | 51972226         | 24         | 5               | 34                    | 26              |
| 337 | SYNJ2BP-COX16 protein isoform 1   | 321400118        | 21         | 5               | 28                    | 25              |
| 338 | hydroxyacyl-coenzyme A dehydrogenase, mitochondrial isoform 1 precursor         | 296179427        | 36         | 8               | 47                    | 25              |

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**Supplementary Table 6: Contd...**

| No  | Protein   | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|---|------------------|------------|-----------------|-----------------------|-----------------|
| 339 | cullin-associated NEDD8-dissociated protein 1   | 21361794         | 136        | 12              | 12                    | 25              |
| 340 | cytochrome c1, heme protein, mitochondrial  | 21359867         | 35         | 8               | 49                    | 25              |
| 341 | membrane-associated progesterone receptor component 1                                     | 5729875          | 22         | 7               | 28                    | 25              |
| 342 | proteasome subunit beta type-5 isoform 1  | 4506201          | 28         | 9               | 39                    | 25              |
| 343 | eukaryotic initiation factor 4A-I isoform 1   | 4503529          | 46         | 9               | 30                    | 25              |
| 344 | enkurin   | 21450721         | 29         | 8               | 48                    | 25              |
| 345 | brain acid soluble protein 1  | 30795231         | 23         | 6               | 48                    | 25              |
| 346 | poly (rC)-binding protein 1   | 222352151        | 37         | 6               | 16                    | 25              |
| 347 | ubiquitin carboxyl-terminal hydrolase 14 isoform b  | 82880645         | 52         | 6               | 15                    | 25              |
| 348 | prenylcysteine oxidase 1 precursor  | 166795301        | 57         | 9               | 23                    | 25              |
| 349 | aspartate aminotransferase, mitochondrial precursor                                       | 73486658         | 48         | 9               | 29                    | 25              |
| 350 | hornerin  | 57864582         | 282        | 6               | 2.80                  | 25              |
| 351 | parkin coregulated gene protein isoform 2   | 122939202        | 29         | 8               | 35                    | 24              |
| 352 | vesicle-fusing ATPase   | 156564401        | 83         | 9               | 18                    | 24              |
| 353 | annexin A11   | 22165431         | 54         | 10              | 25                    | 24              |
| 354 | gelsolin isoform a precursor  | 4504165          | 86         | 7               | 14                    | 24              |
| 355 | malectin precursor  | 7661948          | 32         | 9               | 43                    | 24              |
| 356 | importin-5  | 24797086         | 126        | 8               | 9.10                  | 24              |
| 357 | protein-L-isoaspartate (D-aspartate) O- methyltransferase isoform 2                       | 354983493        | 30         | 8               | 45                    | 23              |
| 358 | rab GDP dissociation inhibitor beta isoform 1   | 6598323          | 51         | 7               | 24                    | 23              |
| 359 | glypican-4 precursor  | 21614525         | 62         | 7               | 13                    | 23              |
| 360 | 26S proteasome non-ATPase regulatory subunit 2  | 25777602         | 100        | 10              | 15                    | 23              |
| 361 | prostasin preproprotein   | 4506153          | 36         | 5               | 22                    | 23              |
| 362 | keratin, type II cytoskeletal 8   | 4504919          | 54         | 4               | 17                    | 23              |
| 363 | proteasome activator complex subunit 1 isoform 1  | 5453990          | 29         | 9               | 41                    | 23              |
| 364 | protein FAM154A   | 301129242        | 55         | 5               | 14                    | 23              |
| 365 | 40S ribosomal protein S3a   | 4506723          | 30         | 7               | 31                    | 23              |
| 366 | thioredoxin isoform 1   | 50592994         | 12         | 6               | 43                    | 23              |
| 367 | keratin, type I cuticular Ha1   | 14917115         | 47         | 6               | 18                    | 23              |
| 368 | thioredoxin-related transmembrane protein 4 precursor                                     | 40254947         | 39         | 3               | 12                    | 22              |
| 369 | ADP-ribosylation factor 1   | 4502201          | 21         | 8               | 52                    | 22              |
| 370 | kallikrein-2 isoform 1 precursor  | 5031829          | 29         | 3               | 15                    | 22              |
| 371 | transmembrane protein 190 precursor   | 21040263         | 19         | 6               | 39                    | 22              |
| 372 | matrix metalloproteinase-9 preproprotein  | 74272287         | 78         | 9               | 16                    | 22              |
| 373 | very long-chain specific acyl-CoA dehydrogenase, mitochondrial isoform 2 precursor        | 76496475         | 68         | 9               | 20                    | 22              |
| 374 | proteasome subunit alpha type-6   | 23110944         | 27         | 7               | 32                    | 22              |
| 375 | gamma-glutamyltranspeptidase 1 precursor  | 73915090         | 61         | 5               | 10                    | 22              |
| 376 | adenosylhomocysteinase isoform 1  | 9951915          | 48         | 10              | 28                    | 22              |
| 377 | 26S proteasome non-ATPase regulatory subunit 14   | 5031981          | 35         | 7               | 32                    | 22              |
| 378 | lysosome-associated membrane glycoprotein 1 precursor                                     | 112380628        | 45         | 4               | 9.80                  | 22              |
| 379 | transmembrane emp24 domain-containing protein 4 precursor                                 | 33457308         | 26         | 4               | 22                    | 22              |
| 380 | uromodulin precursor  | 59850812         | 70         | 9               | 15                    | 22              |
| 381 | coiled-coil-helix-coiled-coil-helix domain- containing protein 3, mitochondrial precursor | 8923390          | 26         | 10              | 28                    | 22              |
| 382 | F-actin-capping protein subunit beta isoform 1  | 4826659          | 31         | 6               | 27                    | 22              |
| 383 | thioredoxin domain-containing protein 3   | 148839372        | 67         | 10              | 21                    | 22              |
| 384 | barrier-to-autointegration factor   | 4502389          | 10         | 5               | 55                    | 21              |
| 385 | protein DJ-1  | 31543380         | 20         | 10              | 65                    | 21              |
| 386 | uncharacterized protein C20orf107 precursor   | 71043642         | 19         | 7               | 32                    | 21              |
| 387 | neutrophil gelatinase-associated lipocalin precursor                                      | 38455402         | 23         | 5               | 32                    | 21              |
| 388 | histone H2A type 1-A  | 25092737         | 14         | 5               | 35                    | 21              |
| 389 | synaptic vesicle membrane protein VAT-1 homolog   | 18379349         | 42         | 6               | 22                    | 21              |
| 390 | testis-expressed protein 101 isoform 1  | 194018544        | 29         | 5               | 23                    | 21              |
| 391 | cytochrome b-c1 complex subunit 7 isoform 1   | 5454152          | 14         | 6               | 50                    | 21              |
| 392 | cathepsin G preproprotein   | 4503149          | 29         | 7               | 35                    | 21              |
| 393 | CDGSH iron-sulfur domain-containing protein 1   | 8923930          | 12         | 4               | 41                    | 21              |
| 394 | ES1 protein homolog, mitochondrial isoform Ia precursor                                   | 296531406        | 28         | 7               | 38                    | 21              |
| 395 | transforming protein RhoA precursor   | 10835049         | 22         | 6               | 21                    | 21              |

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Supplementary Table 6: Contd...

| No  | Protein  | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|--|------------------|------------|-----------------|-----------------------|-----------------|
| 396 | calpain small subunit 1  | 51599151         | 28         | 5               | 31                    | 21              |
| 397 | annexin A13 isoform a  | 51895795         | 35         | 7               | 29                    | 21              |
| 398 | proteasome subunit alpha type-7-like isoform 2   | 68303563         | 28         | 7               | 43                    | 21              |
| 399 | pyruvate dehydrogenase E1 component subunit alpha, testis-specific form, mitochondrial precursor | 4885543          | 43         | 8               | 22                    | 21              |
| 400 | calicin  | 169636428        | 67         | 8               | 14                    | 21              |
| 401 | CD59 glycoprotein preproprotein  | 187828910        | 14         | 4               | 25                    | 21              |
| 402 | alpha-1-antitrypsin precursor  | 50363217         | 47         | 6               | 19                    | 21              |
| 403 | glutamate carboxypeptidase 2 isoform 1   | 4758398          | 84         | 9               | 19                    | 21              |
| 404 | vesicle-associated membrane protein 3  | 4759300          | 11         | 5               | 41                    | 21              |
| 405 | alanyl-tRNA editing protein Aarsd1 isoform 1   | 217416402        | 66         | 8               | 19                    | 21              |
| 406 | acrosome formation-associated factor isoform 1   | 239582757        | 33         | 5               | 25                    | 21              |
| 407 | 4-trimethylaminobutylaldehyde dehydrogenase  | 115387104        | 56         | 8               | 17                    | 21              |
| 408 | macrophage-capping protein   | 63252913         | 38         | 6               | 18                    | 21              |
| 409 | calcium/calmodulin-dependent protein kinase type II subunit delta isoform 2                      | 26667189         | 54         | 6               | 8.40                  | 21              |
| 410 | uncharacterized protein C2orf57  | 284413778        | 42         | 4               | 15                    | 20              |
| 411 | spondin-2 precursor  | 6912682          | 36         | 5               | 7.90                  | 20              |
| 412 | ADP/ATP translocase 4  | 13775208         | 35         | 8               | 26                    | 20              |
| 413 | glycerol-3-phosphate dehydrogenase 1-like protein  | 24307999         | 38         | 6               | 12                    | 20              |
| 414 | carnitine O-palmitoyltransferase 2, mitochondrial precursor                                      | 4503023          | 74         | 8               | 14                    | 20              |
| 415 | importin subunit alpha-2   | 4504897          | 58         | 5               | 17                    | 20              |
| 416 | annexin A7 isoform 1   | 4502111          | 50         | 8               | 20                    | 20              |
| 417 | WD repeat-containing protein 16 isoform b  | 124028512        | 68         | 11              | 23                    | 20              |
| 418 | dynein heavy chain 8, axonemal   | 332688227        | 539        | 9               | 1.90                  | 20              |
| 419 | ras-related protein Rab-27B  | 5729997          | 25         | 7               | 31                    | 20              |
| 420 | solute carrier family 2, facilitated glucose transporter member 14                               | 23592238         | 56         | 7               | 14                    | 20              |
| 421 | translin   | 4759270          | 26         | 7               | 42                    | 20              |
| 422 | proteasome subunit beta type-4   | 22538467         | 29         | 7               | 41                    | 20              |
| 423 | NADH-cytochrome b5 reductase 2   | 47778923         | 31         | 8               | 46                    | 20              |
| 424 | von Willebrand factor A domain-containing protein 1 isoform 1 precursor                          | 40068485         | 47         | 5               | 19                    | 19              |
| 425 | proteasome subunit alpha type-3 isoform 2  | 23110939         | 28         | 7               | 33                    | 19              |
| 426 | ATP-citrate synthase isoform 1   | 38569421         | 121        | 7               | 5.00                  | 19              |
| 427 | histone H3.1   | 4504281          | 15         | 3               | 17                    | 19              |
| 428 | succinate dehydrogenase [ubiquinone] iron- sulfur subunit, mitochondrial precursor               | 115387094        | 32         | 5               | 18                    | 19              |
| 429 | regenerating islet-derived protein 3-gamma precursor   | 38348213         | 19         | 4               | 34                    | 19              |
| 430 | axonemal dynein light intermediate polypeptide 1   | 37595560         | 32         | 6               | 25                    | 19              |
| 431 | transmembrane and coiled-coil domain- containing protein 2                                       | 56847610         | 20         | 5               | 28                    | 19              |
| 432 | NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 10                                     | 4758774          | 21         | 5               | 37                    | 19              |
| 433 | nuclear pore complex protein Nup93 isoform 1   | 208609990        | 93         | 8               | 16                    | 19              |
| 434 | 26S protease regulatory subunit 7 isoform 1  | 4506209          | 49         | 9               | 26                    | 19              |
| 435 | 10 heat shock protein, mitochondrial   | 4504523          | 11         | 6               | 59                    | 19              |
| 436 | 45 calcium-binding protein isoform 2 precursor   | 18699732         | 42         | 5               | 19                    | 19              |
| 437 | short-chain specific acyl-CoA dehydrogenase, mitochondrial precursor                             | 4557233          | 44         | 8               | 28                    | 19              |
| 438 | sperm acrosome-associated protein 5 precursor  | 120952755        | 18         | 5               | 35                    | 19              |
| 439 | spectrin alpha chain, brain isoform 2  | 154759259        | 285        | 9               | 6.20                  | 19              |
| 440 | calmin   | 19923599         | 112        | 6               | 8.10                  | 19              |
| 441 | reticulocalbin-1 precursor   | 4506455          | 39         | 7               | 37                    | 19              |
| 442 | adenylate kinase 8   | 22749187         | 55         | 7               | 18                    | 19              |
| 443 | tropomyosin alpha-3 chain isoform 2  | 24119203         | 29         | 4               | 21                    | 18              |
| 444 | ubiquitin carboxyl-terminal hydrolase isozyme L3   | 5174741          | 26         | 5               | 27                    | 18              |
| 445 | cytochrome c   | 11128019         | 12         | 5               | 40                    | 18              |
| 446 | kunitz-type protease inhibitor 3 precursor   | 189571689        | 10         | 3               | 29                    | 18              |
| 447 | 40S ribosomal protein S2   | 15055539         | 31         | 7               | 25                    | 18              |
| 448 | lysyl-tRNA synthetase isoform 1  | 194272210        | 71         | 7               | 14                    | 18              |
| 449 | alpha-soluble NSF attachment protein   | 47933379         | 33         | 9               | 44                    | 18              |
| 450 | arfaptin-1 isoform 1   | 71040094         | 42         | 2               | 4.80                  | 18              |
| 451 | uncharacterized protein C9orf24 isoform 1  | 21362074         | 30         | 3               | 9.20                  | 17              |
| 452 | isochorismatase domain-containing protein 2, mitochondrial isoform 2                             | 13376007         | 24         | 5               | 51                    | 17              |

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Supplementary Table 6: Contd...

| No  | Protein  | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|--|------------------|------------|-----------------|-----------------------|-----------------|
| 453 | proteasome subunit beta type-1   | 4506193          | 26         | 4               | 24                    | 17              |
| 454 | pyruvate dehydrogenase protein X component, mitochondrial isoform 2            | 203098816        | 51         | 8               | 21                    | 17              |
| 455 | tektin-5   | 21389569         | 56         | 7               | 17                    | 17              |
| 456 | endoplasmic reticulum-Golgi intermediate compartment protein 1                 | 72534712         | 33         | 6               | 26                    | 17              |
| 457 | ferritin heavy chain   | 56682959         | 21         | 3               | 17                    | 17              |
| 458 | renin receptor precursor   | 15011918         | 39         | 5               | 18                    | 17              |
| 459 | ribonuclease-like protein 13 precursor   | 59276062         | 18         | 5               | 28                    | 17              |
| 460 | kinesin-1 heavy chain  | 4758648          | 110        | 8               | 12                    | 17              |
| 461 | eukaryotic translation initiation factor 3 subunit A                           | 4503509          | 167        | 8               | 7.20                  | 17              |
| 462 | DPY30 domain-containing protein 1  | 20270377         | 21         | 6               | 28                    | 16              |
| 463 | membrane-associated progesterone receptor component 2                          | 291621647        | 26         | 5               | 23                    | 16              |
| 464 | glycodelin precursor   | 65507501         | 21         | 4               | 28                    | 16              |
| 465 | 26S proteasome non-ATPase regulatory subunit 3                                 | 25777612         | 61         | 5               | 12                    | 16              |
| 466 | UMP-CMP kinase isoform a   | 7706497          | 26         | 5               | 31                    | 16              |
| 467 | cytochrome c oxidase subunit 6B1   | 4502985          | 10         | 6               | 67                    | 16              |
| 468 | dynactin subunit 1 isoform 1   | 13259510         | 142        | 6               | 4.10                  | 16              |
| 469 | ras-related protein Rab-7a   | 34147513         | 23         | 4               | 21                    | 16              |
| 470 | sodium/potassium-transporting ATPase subunit alpha-2 proprotein                | 4502271          | 112        | 2               | 9.70                  | 16              |
| 471 | enoyl-CoA delta isomerase 1, mitochondrial isoform 2 precursor                 | 295842266        | 31         | 6               | 22                    | 16              |
| 472 | dnaJ homolog subfamily B member 11 precursor                                   | 7706495          | 41         | 6               | 18                    | 16              |
| 473 | lactadherin isoform a preproprotein  | 167830475        | 43         | 6               | 20                    | 16              |
| 474 | apolipoprotein A-IV precursor  | 71773110         | 45         | 8               | 26                    | 16              |
| 475 | zinc-alpha-2-glycoprotein precursor  | 4502337          | 34         | 7               | 27                    | 16              |
| 476 | ADP-ribosyl cyclase 1  | 38454326         | 34         | 4               | 16                    | 16              |
| 477 | growth arrest-specific protein 6 isoform 1 precursor                           | 4557617          | 75         | 6               | 13                    | 16              |
| 478 | nuclear pore membrane glycoprotein 210 precursor                               | 27477134         | 205        | 9               | 6.80                  | 16              |
| 479 | sodium/potassium-transporting ATPase subunit alpha-1 isoform a                 | 21361181         | 113        | 2               | 11                    | 16              |
| 480 | keratin, type I cuticular Ha5  | 94538345         | 50         | 2               | 13                    | 16              |
| 481 | glycerol kinase 2  | 41393575         | 61         | 6               | 16                    | 15              |
| 482 | lactoylglutathione lyase   | 118402586        | 21         | 6               | 37                    | 15              |
| 483 | speriolin isoform 1  | 197276668        | 62         | 4               | 6.40                  | 15              |
| 484 | L-lactate dehydrogenase A-like 6B  | 15082234         | 42         | 3               | 19                    | 15              |
| 485 | ras-related protein Rab-14   | 19923483         | 24         | 5               | 38                    | 15              |
| 486 | nucleoporin p54  | 26051237         | 55         | 7               | 18                    | 15              |
| 487 | casein kinase II subunit alpha isoform a                                       | 29570791         | 45         | 5               | 22                    | 15              |
| 488 | transcription factor A, mitochondrial precursor                                | 4507401          | 29         | 4               | 19                    | 15              |
| 489 | voltage-dependent anion-selective channel protein 1                            | 4507879          | 31         | 3               | 16                    | 15              |
| 490 | rho GDP-dissociation inhibitor 1 isoform a                                     | 4757768          | 23         | 3               | 23                    | 15              |
| 491 | ATP synthase subunit gamma, mitochondrial isoform L (liver) precursor          | 50345988         | 33         | 6               | 24                    | 15              |
| 492 | glucosidase 2 subunit beta isoform 1 precursor                                 | 48255889         | 59         | 5               | 9.80                  | 15              |
| 493 | nicastrin precursor  | 24638433         | 78         | 5               | 8.70                  | 15              |
| 494 | isocitrate dehydrogenase [NAD] subunit beta, mitochondrial isoform a precursor | 28178821         | 42         | 6               | 22                    | 15              |
| 495 | aspartyl aminopeptidase  | 156416028        | 53         | 7               | 20                    | 15              |
| 496 | leukocyte surface antigen CD47 isoform 1 precursor                             | 4502673          | 35         | 2               | 5.90                  | 15              |
| 497 | protein ERGIC-53 precursor   | 5031873          | 58         | 6               | 14                    | 15              |
| 498 | bifunctional aminoacyl-tRNA synthetase   | 62241042         | 171        | 8               | 5.40                  | 15              |
| 499 | large proline-rich protein BAG6 isoform a                                      | 149158692        | 119        | 6               | 5.20                  | 15              |
| 500 | delta (3,5)-Delta (2,4)-dienoyl-CoA isomerase, mitochondrial precursor         | 70995211         | 36         | 6               | 27                    | 15              |
| 501 | galectin-3-binding protein precursor   | 5031863          | 65         | 6               | 13                    | 15              |
| 502 | signal peptidase complex subunit 3   | 11345462         | 20         | 3               | 18                    | 15              |
| 503 | endophilin-B1 isoform 2  | 331284170        | 44         | 5               | 14                    | 15              |
| 504 | cathepsin D preproprotein  | 4503143          | 45         | 7               | 23                    | 15              |
| 505 | calpain-1 catalytic subunit  | 311893363        | 82         | 7               | 9.90                  | 15              |
| 506 | disintegrin and metalloproteinase domain- containing protein 7 preproprotein   | 114326453        | 86         | 6               | 9.70                  | 15              |
| 507 | translationally-controlled tumor protein                                       | 4507669          | 20         | 5               | 55                    | 14              |
| 508 | signal peptidase complex subunit 2   | 162417971        | 25         | 6               | 32                    | 14              |
| 509 | proteasome subunit alpha type-2  | 4506181          | 26         | 5               | 36                    | 14              |
| 510 | gamma-glutamyl hydrolase precursor   | 4503987          | 36         | 7               | 29                    | 14              |

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Supplementary Table 6: Contd...

| No  | Protein   | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|---|------------------|------------|-----------------|-----------------------|-----------------|
| 511 | eukaryotic translation initiation factor 3 subunit F                          | 4503519          | 38         | 5               | 14                    | 14              |
| 512 | dnaJ homolog subfamily A member 2   | 5031741          | 46         | 6               | 24                    | 14              |
| 513 | hypoxanthine-guanine phosphoribosyltransferase                                | 4504483          | 25         | 5               | 26                    | 14              |
| 514 | prostate and testis expressed protein 1 precursor                             | 19923082         | 14         | 6               | 53                    | 14              |
| 515 | translocon-associated protein subunit alpha precursor                         | 169404009        | 32         | 3               | 12                    | 14              |
| 516 | casein kinase II subunit beta   | 23503295         | 25         | 6               | 39                    | 14              |
| 517 | EF-hand domain-containing family member C2                                    | 31542743         | 87         | 6               | 10                    | 14              |
| 518 | ecto-ADP-ribosyltransferase 3 isoform a precursor                             | 194097380        | 44         | 5               | 16                    | 14              |
| 519 | alpha-1-antichymotrypsin precursor  | 50659080         | 48         | 5               | 15                    | 14              |
| 520 | testis-specific H1 histone  | 32401437         | 28         | 4               | 13                    | 14              |
| 521 | beta-defensin 129 precursor   | 18250304         | 20         | 4               | 24                    | 14              |
| 522 | lysosome membrane protein 2 isoform 1 precursor                               | 5031631          | 54         | 6               | 19                    | 14              |
| 523 | vimentin  | 62414289         | 54         | 8               | 21                    | 14              |
| 524 | 26S proteasome non-ATPase regulatory subunit 6                                | 7661914          | 46         | 5               | 15                    | 14              |
| 525 | transmembrane emp24 domain-containing protein 2 precursor                     | 5803149          | 23         | 3               | 25                    | 14              |
| 526 | glycerophosphodiester phosphodiesterase 1                                     | 7706617          | 38         | 5               | 18                    | 14              |
| 527 | junction plakoglobin  | 12056468         | 82         | 6               | 8.90                  | 14              |
| 528 | plasma membrane calcium-transporting ATPase 4 isoform 4b                      | 48255957         | 134        | 8               | 9.50                  | 14              |
| 529 | testis, prostate and placenta-expressed protein isoform 2 precursor           | 154759245        | 31         | 5               | 27                    | 14              |
| 530 | keratin, type I cuticular Ha6   | 4504927          | 52         | 2               | 4.10                  | 14              |
| 531 | adenine phosphoribosyltransferase isoform a                                   | 4502171          | 20         | 4               | 17                    | 13              |
| 532 | heme-binding protein 2  | 7657603          | 23         | 5               | 29                    | 13              |
| 533 | histidine triad nucleotide-binding protein 1                                  | 4885413          | 14         | 4               | 48                    | 13              |
| 534 | phosphoglycerate mutase 1   | 4505753          | 29         | 3               | 33                    | 13              |
| 535 | CD63 antigen isoform A  | 4502679          | 26         | 2               | 5.00                  | 13              |
| 536 | V-type proton ATPase catalytic subunit A                                      | 19913424         | 68         | 4               | 8.60                  | 13              |
| 537 | stomatin-like protein 2   | 7305503          | 39         | 5               | 25                    | 13              |
| 538 | 40S ribosomal protein S15a  | 71772415         | 15         | 3               | 24                    | 13              |
| 539 | epoxide hydrolase 2   | 27597073         | 63         | 3               | 8.60                  | 13              |
| 540 | 40S ribosomal protein S16   | 4506691          | 16         | 3               | 20                    | 13              |
| 541 | GTP-binding nuclear protein Ran   | 5453555          | 24         | 4               | 16                    | 13              |
| 542 | profilin-2 isoform a  | 16753215         | 15         | 4               | 31                    | 13              |
| 543 | dnaJ homolog subfamily B member 8   | 23503241         | 26         | 5               | 30                    | 13              |
| 544 | coiled-coil domain-containing protein 147                                     | 56961680         | 103        | 5               | 6.80                  | 13              |
| 545 | homogentisate 1,2-dioxygenase   | 115527117        | 50         | 6               | 22                    | 13              |
| 546 | EF-hand calcium-binding domain-containing protein 6 isoform a                 | 38570107         | 173        | 3               | 2.20                  | 13              |
| 547 | tetratricopeptide repeat protein 25   | 13899233         | 77         | 3               | 7.60                  | 13              |
| 548 | serine/threonine-protein phosphatase 2A 65 regulatory subunit A alpha isoform | 21361399         | 65         | 6               | 8.30                  | 13              |
| 549 | lysosomal alpha-glucosidase preproprotein                                     | 119393891        | 105        | 3               | 4.20                  | 13              |
| 550 | leucine zipper transcription factor-like protein 1                            | 9966793          | 35         | 3               | 14                    | 13              |
| 551 | 2-oxoglutarate dehydrogenase, mitochondrial isoform 3 precursor               | 259013553        | 116        | 7               | 8.00                  | 13              |
| 552 | calcium-binding and spermatid-specific protein 1                              | 90652863         | 43         | 3               | 12                    | 13              |
| 553 | prolargin precursor   | 4506041          | 44         | 5               | 15                    | 13              |
| 554 | 26S proteasome non-ATPase regulatory subunit 1 isoform 1                      | 25777600         | 106        | 9               | 12                    | 13              |
| 555 | dnaJ homolog subfamily C member 3 precursor                                   | 5453980          | 58         | 5               | 18                    | 13              |
| 556 | melanoma inhibitory activity protein 3 precursor                              | 122891870        | 214        | 5               | 3.40                  | 13              |
| 557 | tropomodulin-3  | 7657649          | 40         | 6               | 25                    | 13              |
| 558 | cytochrome b5 isoform 1   | 41281768         | 15         | 4               | 43                    | 12              |
| 559 | enoyl-CoA hydratase, mitochondrial  | 194097323        | 31         | 5               | 25                    | 12              |
| 560 | nucleotide exchange factor SIL1 precursor                                     | 11968009         | 52         | 5               | 12                    | 12              |
| 561 | actin-related protein M1  | 221139714        | 41         | 4               | 18                    | 12              |
| 562 | retinol dehydrogenase 11 isoform 1 precursor                                  | 166795268        | 35         | 5               | 23                    | 12              |
| 563 | endoplasmic reticulum-Golgi intermediate compartment protein 3 isoform a      | 38327615         | 44         | 5               | 11                    | 12              |
| 564 | programmed cell death protein 6   | 7019485          | 22         | 4               | 25                    | 12              |
| 565 | NADH dehydrogenase [ubiquinone] flavoprotein 2, mitochondrial precursor       | 222080062        | 27         | 5               | 27                    | 12              |
| 566 | sulfatase-modifying factor 2 isoform e precursor                              | 194248090        | 39         | 4               | 14                    | 12              |
| 567 | aflatoxin B1 aldehyde reductase member 2                                      | 41327764         | 40         | 4               | 16                    | 12              |

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Supplementary Table 6: Contd...

| No  | Protein  | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|--|------------------|------------|-----------------|-----------------------|-----------------|
| 568 | 40S ribosomal protein S9   | 14141193         | 23         | 5               | 16                    | 12              |
| 569 | receptor expression-enhancing protein 5  | 115430112        | 21         | 5               | 15                    | 12              |
| 570 | metalloproteinase inhibitor 1 precursor  | 4507509          | 23         | 5               | 39                    | 12              |
| 571 | titin isoform N2-A   | 291045225        | 3713       | 6               | 0.08                  | 12              |
| 572 | desmoplakin isoform I  | 58530840         | 332        | 7               | 3.00                  | 12              |
| 573 | stress-induced-phosphoprotein 1  | 5803181          | 63         | 5               | 11                    | 12              |
| 574 | complement component 1 Q subcomponent-binding protein, mitochondrial precursor | 4502491          | 31         | 4               | 27                    | 12              |
| 575 | 14 phosphohistidine phosphatase isoform 3                                      | 24475861         | 14         | 4               | 43                    | 12              |
| 576 | ectonucleotide pyrophosphatase/phosphodiesterase family member 3               | 111160296        | 100        | 8               | 14                    | 12              |
| 577 | general vesicular transport factor p115  | 4505541          | 108        | 5               | 5.10                  | 12              |
| 578 | cystatin-B   | 4503117          | 11         | 4               | 55                    | 12              |
| 579 | beta-hexosaminidase subunit alpha preproprotein                                | 189181666        | 61         | 4               | 9.60                  | 12              |
| 580 | FUN14 domain-containing protein 2  | 24371248         | 21         | 3               | 11                    | 11              |
| 581 | epididymal secretory protein E3-alpha precursor                                | 11386189         | 18         | 4               | 23                    | 11              |
| 582 | sperm acrosome membrane-associated protein 4 precursor                         | 19424138         | 13         | 2               | 22                    | 11              |
| 583 | beta-lactamase-like protein 2  | 7705793          | 33         | 6               | 33                    | 11              |
| 584 | NME1-NME2 protein  | 66392203         | 30         | 6               | 22                    | 11              |
| 585 | proteasome subunit alpha type-4 isoform 1                                      | 4506185          | 29         | 5               | 21                    | 11              |
| 586 | 40S ribosomal protein S3   | 15718687         | 27         | 5               | 32                    | 11              |
| 587 | 15 selenoprotein isoform 1 precursor   | 42741648         | 18         | 4               | 25                    | 11              |
| 588 | receptor expression-enhancing protein 6  | 19923919         | 21         | 3               | 16                    | 11              |
| 589 | proteasome subunit beta type-7 proprotein                                      | 4506203          | 30         | 4               | 18                    | 11              |
| 590 | transcription elongation factor B polypeptide 2 isoform b                      | 46276893         | 18         | 5               | 34                    | 11              |
| 591 | neutrophil elastase preproprotein  | 4503549          | 29         | 3               | 17                    | 11              |
| 592 | mesencephalic astrocyte-derived neurotrophic factor precursor                  | 299523086        | 21         | 5               | 31                    | 11              |
| 593 | atlastin-3   | 45827806         | 61         | 4               | 13                    | 11              |
| 594 | disintegrin and metalloproteinase domain- containing protein 30 preproprotein  | 31881770         | 89         | 3               | 3.90                  | 11              |
| 595 | malate dehydrogenase, cytoplasmic isoform 1                                    | 312283701        | 39         | 4               | 14                    | 11              |
| 596 | charged multivesicular body protein 4b   | 28827795         | 25         | 5               | 27                    | 11              |
| 597 | long-chain-fatty-acid--CoA ligase 6 isoform e                                  | 327412327        | 79         | 7               | 14                    | 11              |
| 598 | retinal dehydrogenase 1  | 21361176         | 55         | 6               | 19                    | 11              |
| 599 | cytochrome c oxidase subunit 7A2, mitochondrial precursor                      | 262118227        | 13         | 2               | 20                    | 11              |
| 600 | UTP--glucose-1-phosphate uridylyltransferase isoform b                         | 48255968         | 56         | 4               | 10                    | 11              |
| 601 | leucine-rich repeat-containing protein 59                                      | 40254924         | 35         | 4               | 16                    | 11              |
| 602 | outer dense fiber protein 3  | 19526475         | 28         | 4               | 20                    | 10              |
| 603 | cytochrome b-c1 complex subunit Rieske, mitochondrial                          | 163644321        | 30         | 2               | 16                    | 10              |
| 604 | lysozyme-like protein 4 precursor  | 21389465         | 16         | 4               | 29                    | 10              |
| 605 | serine/threonine-protein phosphatase PP1- beta catalytic subunit isoform 1     | 4506005          | 37         | 4               | 18                    | 10              |
| 606 | myeloblastin precursor   | 71361688         | 28         | 4               | 21                    | 10              |
| 607 | 26S proteasome non-ATPase regulatory subunit 12 isoform 1                      | 4506221          | 53         | 4               | 12                    | 10              |
| 608 | phosphoglycerate mutase 2  | 50593010         | 29         | 4               | 23                    | 10              |
| 609 | coiled-coil domain-containing protein 63                                       | 22749217         | 66         | 3               | 7.80                  | 10              |
| 610 | hydroxyacylglutathione hydrolase, mitochondrial isoform 1 precursor            | 94538322         | 34         | 5               | 21                    | 10              |
| 611 | ATP synthase subunit g, mitochondrial  | 51479156         | 11         | 4               | 43                    | 10              |
| 612 | ropporin-1-like protein  | 17572807         | 26         | 4               | 23                    | 10              |
| 613 | transcription elongation factor B polypeptide 1 isoform a                      | 325652033        | 12         | 3               | 41                    | 10              |
| 614 | platelet-activating factor acetylhydrolase IB subunit beta isoform a           | 4505585          | 26         | 2               | 12                    | 10              |
| 615 | adenylyl cyclase-associated protein 1  | 5453595          | 52         | 5               | 7.40                  | 10              |
| 616 | cathepsin F precursor  | 6042196          | 53         | 3               | 5.20                  | 10              |
| 617 | tryptophanyl-tRNA synthetase, cytoplasmic isoform b                            | 47419918         | 49         | 4               | 16                    | 10              |
| 618 | heat shock 70 protein 13 precursor   | 48928056         | 52         | 4               | 9.80                  | 10              |
| 619 | proteasome subunit beta type-3   | 22538465         | 23         | 4               | 30                    | 10              |
| 620 | EF-hand domain-containing protein 1 isoform 1                                  | 156616292        | 74         | 4               | 8.90                  | 10              |
| 621 | 40S ribosomal protein S8   | 4506743          | 24         | 3               | 18                    | 10              |
| 622 | serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform        | 4506017          | 36         | 3               | 13                    | 10              |

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**Supplementary Table 6: Contd...**

| No  | Protein   | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|---|------------------|------------|-----------------|-----------------------|-----------------|
| 623 | septin-7 isoform 2  | 148352329        | 51         | 4               | 14                    | 10              |
| 624 | NADH dehydrogenase [ubiquinone] flavoprotein 1, mitochondrial isoform 1 precursor | 20149568         | 51         | 5               | 15                    | 10              |
| 625 | abhydrolase domain-containing protein 10, mitochondrial precursor                 | 8923001          | 34         | 3               | 15                    | 10              |
| 626 | basigin isoform 2 precursor   | 38372925         | 29         | 4               | 23                    | 10              |
| 627 | uncharacterized protein C9orf171  | 46409466         | 36         | 4               | 14                    | 10              |
| 628 | translocon-associated protein subunit delta isoform 3 precursor                   | 325301078        | 20         | 3               | 19                    | 10              |
| 629 | alpha-mannosidase 2C1   | 46852164         | 116        | 5               | 6.40                  | 10              |
| 630 | 60S ribosomal protein L7  | 15431301         | 29         | 4               | 23                    | 10              |
| 631 | LETM1 and EF-hand domain-containing protein 1, mitochondrial precursor            | 6912482          | 83         | 5               | 7.40                  | 10              |
| 632 | matrielin-2 isoform a precursor   | 62548860         | 107        | 4               | 6.00                  | 10              |
| 633 | bifunctional ATP-dependent dihydroxyacetone kinase/FAD-AMP lyase (cyclizing)      | 20149621         | 59         | 5               | 13                    | 10              |
| 634 | exportin-7  | 154448892        | 124        | 5               | 5.30                  | 10              |
| 635 | glycerol kinase isoform a   | 42794763         | 58         | 3               | 9.80                  | 10              |
| 636 | apolipoprotein A-I preproprotein  | 4557321          | 31         | 4               | 13                    | 10              |
| 637 | stromal cell-derived factor 2-like protein 1 precursor                            | 56243533         | 24         | 4               | 36                    | 10              |
| 638 | ras-related protein Rab-1B  | 13569962         | 22         | 4               | 21                    | 9               |
| 639 | keratin, type I cytoskeletal 18   | 4557888          | 48         | 2               | 11                    | 9               |
| 640 | 26S proteasome non-ATPase regulatory subunit 8                                    | 156631005        | 40         | 5               | 21                    | 9               |
| 641 | transmembrane protein 89 precursor  | 56847630         | 18         | 3               | 17                    | 9               |
| 642 | tomoregulin-2 precursor   | 12383051         | 41         | 4               | 9.90                  | 9               |
| 643 | myotrophin  | 21956645         | 13         | 3               | 31                    | 9               |
| 644 | NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 8                      | 7657369          | 20         | 4               | 26                    | 9               |
| 645 | 60S ribosomal protein L23   | 4506605          | 15         | 3               | 27                    | 9               |
| 646 | dehydrogenase/reductase SDR family member 7 precursor                             | 7706318          | 38         | 4               | 14                    | 9               |
| 647 | thioredoxin domain-containing protein 17  | 14249348         | 14         | 4               | 38                    | 9               |
| 648 | C-Myc-binding protein   | 57242777         | 12         | 3               | 39                    | 9               |
| 649 | 60S ribosomal protein L7a   | 4506661          | 30         | 3               | 15                    | 9               |
| 650 | NADH-cytochrome b5 reductase 3 isoform 2  | 193794826        | 32         | 5               | 28                    | 9               |
| 651 | epoxide hydrolase 1 precursor   | 209862837        | 53         | 4               | 7.70                  | 9               |
| 652 | carcinoembryonic antigen-related cell adhesion molecule 6 precursor               | 40255013         | 37         | 3               | 17                    | 9               |
| 653 | dnaJ homolog subfamily B member 1   | 5453690          | 38         | 3               | 11                    | 9               |
| 654 | left-right determination factor 1 preproprotein                                   | 10337603         | 41         | 5               | 14                    | 9               |
| 655 | NADH dehydrogenase [ubiquinone] iron-sulfur protein 8, mitochondrial precursor    | 4505371          | 24         | 5               | 24                    | 9               |
| 656 | epididymal secretory protein E1 precursor   | 5453678          | 17         | 4               | 38                    | 9               |
| 657 | thioredoxin domain-containing protein 2 isoform 2                                 | 148727319        | 60         | 3               | 4.90                  | 9               |
| 658 | protein ALEX XLas   | 117938759        | 111        | 3               | 3.60                  | 9               |
| 659 | adenylate kinase 7  | 148727333        | 83         | 4               | 9.30                  | 9               |
| 660 | mRNA export factor  | 62739173         | 41         | 3               | 7.90                  | 9               |
| 661 | phospholipase A1 member A isoform 2 precursor                                     | 332688256        | 48         | 3               | 8.20                  | 9               |
| 662 | kinectin isoform a  | 33620775         | 156        | 5               | 5.50                  | 9               |
| 663 | inorganic pyrophosphatase   | 11056044         | 33         | 4               | 24                    | 9               |
| 664 | acylamino-acid-releasing enzyme   | 23510451         | 81         | 4               | 10.00                 | 9               |
| 665 | alcohol dehydrogenase class-3   | 71565154         | 40         | 5               | 20                    | 9               |
| 666 | translin-associated protein X   | 5174731          | 33         | 4               | 23                    | 9               |
| 667 | mitochondrial import receptor subunit TOM34                                       | 21361356         | 35         | 4               | 18                    | 9               |
| 668 | putative peptidyl-tRNA hydrolase PTRHD1   | 61966781         | 16         | 3               | 25                    | 9               |
| 669 | filaggrin-2   | 62122917         | 248        | 3               | 1.80                  | 9               |
| 670 | fragile X mental retardation 1 neighbor protein                                   | 22749199         | 29         | 3               | 16                    | 9               |
| 671 | glyoxylate reductase/hydroxypyruvate reductase                                    | 6912396          | 36         | 3               | 16                    | 9               |
| 672 | ras-related protein Rab-1A isoform 1  | 4758988          | 23         | 2               | 26                    | 9               |
| 673 | NADPH--cytochrome P450 reductase  | 127139033        | 77         | 4               | 11                    | 8               |
| 674 | ubiquitin thioesterase OTUB1  | 109148508        | 31         | 5               | 25                    | 8               |
| 675 | copper homeostasis protein cutC homolog   | 148596990        | 29         | 2               | 12                    | 8               |
| 676 | arachidonate 15-lipoxygenase B isoform d  | 85067501         | 76         | 5               | 12                    | 8               |
| 677 | ras-related protein Rab-5C isoform a  | 41393614         | 23         | 3               | 17                    | 8               |
| 678 | myosin-VI   | 92859701         | 149        | 4               | 4.40                  | 8               |
| 679 | superoxide dismutase [Mn], mitochondrial isoform A precursor                      | 67782305         | 25         | 3               | 17                    | 8               |

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Supplementary Table 6: Contd...

| No  | Protein  | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|--|------------------|------------|-----------------|-----------------------|-----------------|
| 680 | ATP synthase subunit delta, mitochondrial precursor                            | 50345991         | 17         | 2               | 14                    | 8               |
| 681 | coiled-coil domain-containing protein 105                                      | 226492892        | 57         | 3               | 6.80                  | 8               |
| 682 | NADH dehydrogenase [ubiquinone] iron-sulfur protein 6, mitochondrial precursor | 4758792          | 14         | 4               | 52                    | 8               |
| 683 | BPI fold-containing family A member 3 isoform 1 precursor                      | 109627654        | 28         | 4               | 28                    | 8               |
| 684 | F-actin-capping protein subunit alpha-1  | 5453597          | 33         | 4               | 26                    | 8               |
| 685 | carbonic anhydrase 2   | 4557395          | 29         | 4               | 20                    | 8               |
| 686 | dnaJ homolog subfamily B member 6 isoform b                                    | 4885495          | 27         | 3               | 17                    | 8               |
| 687 | mammaglobin-B precursor  | 4505171          | 11         | 3               | 40                    | 8               |
| 688 | metalloproteinase inhibitor 3 precursor  | 4507513          | 24         | 3               | 11                    | 8               |
| 689 | ras-related protein Ral-A precursor  | 33946329         | 24         | 2               | 11                    | 8               |
| 690 | trafficking protein particle complex subunit 3                                 | 7656926          | 20         | 3               | 17                    | 8               |
| 691 | serine/threonine-protein phosphatase with EF- hands 1 isoform 1b               | 23312374         | 73         | 3               | 8.20                  | 8               |
| 692 | ras-related protein Rab-5B isoform 1   | 354725902        | 24         | 2               | 18                    | 8               |
| 693 | biglycan preproprotein   | 4502403          | 42         | 3               | 14                    | 8               |
| 694 | complement decay-accelerating factor isoform 2 precursor                       | 168693643        | 49         | 4               | 12                    | 8               |
| 695 | uncharacterized protein C6orf81  | 31542280         | 41         | 2               | 7.60                  | 8               |
| 696 | ATPase inhibitor, mitochondrial isoform 1 precursor                            | 7705927          | 12         | 3               | 15                    | 8               |
| 697 | bifunctional purine biosynthesis protein PURH                                  | 20127454         | 65         | 4               | 11                    | 8               |
| 698 | synaptogyrin-2   | 4759202          | 25         | 4               | 16                    | 8               |
| 699 | transgelin-2   | 4507357          | 22         | 3               | 13                    | 8               |
| 700 | midkine precursor  | 4505135          | 16         | 4               | 38                    | 8               |
| 701 | multifunctional protein ADE2 isoform 2   | 5453539          | 47         | 3               | 11                    | 8               |
| 702 | desmoglein-1 preproprotein   | 119703744        | 114        | 4               | 6.50                  | 8               |
| 703 | estradiol 17-beta-dehydrogenase 12   | 7705855          | 34         | 3               | 13                    | 8               |
| 704 | sarcoplasmic/endoplasmic reticulum calcium ATPase 2 isoform b                  | 24638454         | 115        | 3               | 4.50                  | 8               |
| 705 | eukaryotic translation initiation factor 6 isoform a                           | 4504771          | 27         | 4               | 27                    | 8               |
| 706 | protein TSC21  | 22749357         | 21         | 3               | 26                    | 8               |
| 707 | guanine nucleotide-binding protein G (I)/G (S)/G (T) subunit beta-2            | 20357529         | 37         | 3               | 6.20                  | 8               |
| 708 | dnaJ homolog subfamily A member 4 isoform 2                                    | 194328760        | 45         | 4               | 17                    | 8               |
| 709 | membrane cofactor protein isoform 4 precursor                                  | 24432108         | 43         | 4               | 12                    | 8               |
| 710 | protein S100-A10   | 4506761          | 11         | 2               | 28                    | 8               |
| 711 | protein arginine N-methyltransferase 5 isoform a                               | 20070220         | 73         | 3               | 5.00                  | 8               |
| 712 | ubiquitin-conjugating enzyme E2 N  | 4507793          | 17         | 3               | 24                    | 8               |
| 713 | coiled-coil-helix-coiled-coil-helix domain- containing protein 6               | 14150134         | 26         | 3               | 22                    | 8               |
| 714 | transmembrane emp24 domain-containing protein 7 precursor                      | 32996709         | 25         | 3               | 15                    | 7               |
| 715 | uncharacterized protein C9orf9   | 33285006         | 19         | 3               | 29                    | 7               |
| 716 | 60S acidic ribosomal protein P2  | 4506671          | 12         | 3               | 43                    | 7               |
| 717 | programmed cell death 6-interacting protein isoform 1                          | 22027538         | 96         | 3               | 4.70                  | 7               |
| 718 | histone H2A-Bbd type 2/3   | 63029935         | 13         | 3               | 43                    | 7               |
| 719 | ran-specific GTPase-activating protein   | 4506407          | 23         | 3               | 15                    | 7               |
| 720 | 40S ribosomal protein S4, X isoform X isoform                                  | 4506725          | 30         | 6               | 26                    | 7               |
| 721 | protein NipSnap homolog 3A   | 22267436         | 28         | 2               | 15                    | 7               |
| 722 | histidine triad nucleotide-binding protein 2, mitochondrial precursor          | 14211923         | 17         | 3               | 31                    | 7               |
| 723 | acyl carrier protein, mitochondrial precursor                                  | 4826852          | 17         | 2               | 12                    | 7               |
| 724 | signal peptidase complex catalytic subunit SEC11A                              | 7657609          | 21         | 3               | 26                    | 7               |
| 725 | cytochrome b-c1 complex subunit 6, mitochondrial                               | 83627705         | 11         | 4               | 51                    | 7               |
| 726 | ras-related protein Rap-1b isoform 1 precursor                                 | 7661678          | 21         | 3               | 18                    | 7               |
| 727 | 60S ribosomal protein L18  | 4506607          | 22         | 4               | 26                    | 7               |
| 728 | proteasome subunit beta type-2 isoform 1                                       | 4506195          | 23         | 3               | 31                    | 7               |
| 729 | lysosome-associated membrane glycoprotein 2 isoform C precursor                | 169790833        | 45         | 2               | 4.90                  | 7               |
| 730 | glutathione S-transferase omega-2 isoform 1                                    | 38016131         | 28         | 3               | 11                    | 7               |
| 731 | thioredoxin-like protein 1   | 4759274          | 32         | 4               | 15                    | 7               |
| 732 | prostate and testis expressed protein 2 precursor                              | 47086459         | 13         | 3               | 35                    | 7               |
| 733 | proteasome activator complex subunit 4   | 163644283        | 211        | 4               | 2.70                  | 7               |
| 734 | carboxypeptidase D isoform 1 precursor   | 22202611         | 153        | 4               | 4.50                  | 7               |
| 735 | prostaglandin-H2 D-isomerase precursor   | 32171249         | 21         | 4               | 29                    | 7               |

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Supplementary Table 6: Contd...

| No  | Protein  | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|--|------------------|------------|-----------------|-----------------------|-----------------|
| 736 | sortilin isoform 1 preproprotein   | 17149834         | 92         | 3               | 4.00                  | 7               |
| 737 | antileukoproteinase precursor  | 4507065          | 14         | 3               | 22                    | 7               |
| 738 | phospholipase A2, membrane associated precursor                                    | 239915991        | 16         | 2               | 18                    | 7               |
| 739 | prenylated Rab acceptor protein 1  | 222144309        | 21         | 3               | 18                    | 7               |
| 740 | chloride intracellular channel protein 4   | 7330335          | 29         | 4               | 21                    | 7               |
| 741 | EF-hand calcium-binding domain-containing protein 1 isoform a                      | 13375787         | 24         | 3               | 23                    | 7               |
| 742 | actin-like protein 7A  | 5729720          | 49         | 4               | 9.90                  | 7               |
| 743 | serine/threonine-protein phosphatase 2A activator isoform b                        | 29725611         | 37         | 3               | 17                    | 7               |
| 744 | peptidase inhibitor 15 preproprotein   | 7705676          | 29         | 3               | 15                    | 7               |
| 745 | protein OS-9 isoform 1 precursor   | 5803109          | 76         | 4               | 10                    | 7               |
| 746 | integrin beta-1 isoform 1D precursor   | 19743819         | 89         | 3               | 5.90                  | 7               |
| 747 | heat shock 70 protein 4  | 38327039         | 94         | 4               | 5.10                  | 7               |
| 748 | vesicle-associated membrane protein 8  | 14043026         | 11         | 3               | 27                    | 7               |
| 749 | quinone oxidoreductase isoform a   | 13236495         | 35         | 4               | 19                    | 7               |
| 750 | protein FAM71A   | 282721094        | 63         | 4               | 7.10                  | 7               |
| 751 | receptor-type tyrosine-protein phosphatase eta isoform 1 precursor                 | 148728162        | 146        | 3               | 3.40                  | 7               |
| 752 | acyl-CoA-binding protein isoform 5   | 295842514        | 14         | 2               | 28                    | 7               |
| 753 | actin-related protein 2 isoform b  | 5031571          | 45         | 4               | 14                    | 7               |
| 754 | shootin-1 isoform a  | 187761324        | 72         | 4               | 7.10                  | 7               |
| 755 | nucleosome assembly protein 1-like 1   | 4758756          | 45         | 3               | 10                    | 7               |
| 756 | fibronectin type III domain-containing protein 8                                   | 8922138          | 36         | 3               | 9.90                  | 7               |
| 757 | protein BRICK1   | 27544939         | 9          | 4               | 55                    | 7               |
| 758 | carnitine O-palmitoyltransferase 1, muscle isoform isoform a                       | 223468678        | 88         | 3               | 5.70                  | 7               |
| 759 | nuclear migration protein nudC   | 5729953          | 38         | 3               | 11                    | 7               |
| 760 | WD repeat-containing protein 65 isoform a  | 345199335        | 149        | 4               | 3.90                  | 7               |
| 761 | guanine nucleotide-binding protein subunit beta-2-like 1                           | 5174447          | 35         | 2               | 8.50                  | 7               |
| 762 | guanine nucleotide-binding protein G (o) subunit alpha isoform a                   | 10567816         | 40         | 2               | 12                    | 7               |
| 763 | collagen alpha-2(I) chain precursor  | 11386161         | 65         | 2               | 3.90                  | 7               |
| 764 | proteasome subunit beta type-6   | 23110925         | 25         | 2               | 8.80                  | 6               |
| 765 | dynein light chain Tctex-type 1  | 5730085          | 12         | 3               | 39                    | 6               |
| 766 | cAMP-dependent protein kinase catalytic subunit alpha isoform 2                    | 46909584         | 40         | 3               | 11                    | 6               |
| 767 | semaphorin-3C precursor  | 5454048          | 85         | 2               | 6.10                  | 6               |
| 768 | cadherin-1 preproprotein   | 4757960          | 97         | 2               | 2.20                  | 6               |
| 769 | retinoid-inducible serine carboxypeptidase precursor                               | 11055992         | 51         | 3               | 8.80                  | 6               |
| 770 | acyl-coenzyme A thioesterase 13 isoform 2  | 231567183        | 12         | 2               | 26                    | 6               |
| 771 | thiosulfate sulfurtransferase/rhodanese-like domain-containing protein 1 isoform 1 | 163965377        | 13         | 2               | 20                    | 6               |
| 772 | D-dopachrome decarboxylase   | 4503291          | 13         | 3               | 34                    | 6               |
| 773 | mitochondrial import receptor subunit TOM22 homolog                                | 9910382          | 16         | 4               | 58                    | 6               |
| 774 | nucleosome assembly protein 1-like 4   | 5174613          | 43         | 2               | 8.50                  | 6               |
| 775 | grancalcin   | 6912388          | 24         | 2               | 8.30                  | 6               |
| 776 | eukaryotic translation elongation factor 1 epsilon-1 isoform 1                     | 4758862          | 20         | 2               | 14                    | 6               |
| 777 | sialidase-1 precursor  | 4557791          | 45         | 2               | 5.50                  | 6               |
| 778 | NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 2 isoform 1             | 4505355          | 11         | 2               | 31                    | 6               |
| 779 | tropomyosin alpha-4 chain isoform 1  | 223555975        | 33         | 3               | 5.30                  | 6               |
| 780 | COP9 signalosome complex subunit 4   | 38373690         | 46         | 4               | 16                    | 6               |
| 781 | A disintegrin and metalloproteinase with thrombospondin motifs 1 preproprotein     | 50845384         | 105        | 2               | 3.40                  | 6               |
| 782 | dynein light chain roadblock-type 2  | 18702323         | 11         | 2               | 34                    | 6               |
| 783 | basement membrane-specific heparan sulfate proteoglycan core protein precursor     | 126012571        | 469        | 2               | 0.61                  | 6               |
| 784 | succinyl-CoA ligase [ADP-forming] subunit beta, mitochondrial precursor            | 11321583         | 50         | 3               | 5.60                  | 6               |
| 785 | thioredoxin-dependent peroxide reductase, mitochondrial isoform b                  | 32483377         | 26         | 2               | 9.70                  | 6               |
| 786 | disintegrin and metalloproteinase domain- containing protein 29 preproprotein      | 73765552         | 93         | 3               | 4.40                  | 6               |
| 787 | 60S ribosomal protein L12  | 4506597          | 18         | 3               | 24                    | 6               |
| 788 | protein NDRG3 isoform a  | 14165266         | 41         | 2               | 8.30                  | 6               |
| 789 | EF-hand domain-containing protein KIAA0494   | 7662160          | 55         | 3               | 10                    | 6               |
| 790 | pro-cathepsin H preproprotein  | 23110955         | 37         | 3               | 13                    | 6               |

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Supplementary Table 6: Contd...

| No  | Protein   | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|---|------------------|------------|-----------------|-----------------------|-----------------|
| 791 | PREDICTED: hypothetical protein LOC728597                                   | 341914388        | 72         | 2               | 3.70                  | 6               |
| 792 | NADH dehydrogenase [ubiquinone] iron-sulfur protein 5                       | 4758790          | 13         | 2               | 14                    | 6               |
| 793 | platelet-activating factor acetylhydrolase precursor                        | 270133071        | 50         | 4               | 15                    | 6               |
| 794 | kelch-like protein 10   | 148664209        | 69         | 2               | 3.90                  | 6               |
| 795 | 40S ribosomal protein SA  | 59859885         | 33         | 2               | 10                    | 6               |
| 796 | enoyl-CoA delta isomerase 2, mitochondrial isoform 2                        | 260274832        | 44         | 2               | 9.10                  | 6               |
| 797 | sperm-associated antigen 11B isoform D preproprotein                        | 126131097        | 15         | 2               | 17                    | 6               |
| 798 | sorcini isoform b   | 38679884         | 20         | 2               | 12                    | 6               |
| 799 | calmegin precursor  | 4758004          | 70         | 3               | 6.10                  | 6               |
| 800 | ubiquitin carboxyl-terminal hydrolase 7                                     | 150378533        | 128        | 2               | 3.20                  | 6               |
| 801 | methylosome protein 50  | 13129110         | 37         | 2               | 6.10                  | 6               |
| 802 | cell division control protein 42 homolog isoform 1                          | 4757952          | 21         | 2               | 20                    | 6               |
| 803 | actin-related protein 3   | 5031573          | 47         | 3               | 11                    | 6               |
| 804 | aspartate aminotransferase, cytoplasmic                                     | 4504067          | 46         | 2               | 8.50                  | 6               |
| 805 | acid sphingomyelinase-like phosphodiesterase 3b isoform 1 precursor         | 57242798         | 51         | 3               | 9.70                  | 6               |
| 806 | nidogen-1 precursor   | 115298674        | 136        | 4               | 6.00                  | 6               |
| 807 | BAG family molecular chaperone regulator 2                                  | 4757834          | 24         | 3               | 21                    | 6               |
| 808 | zona pellucida-binding protein 2 isoform 1 precursor                        | 84875535         | 36         | 3               | 13                    | 6               |
| 809 | sialic acid synthase  | 12056473         | 40         | 2               | 8.60                  | 6               |
| 810 | lambda-crystallin homolog   | 115430219        | 35         | 4               | 18                    | 6               |
| 811 | tubulin polymerization-promoting protein family member 2                    | 226491350        | 19         | 4               | 44                    | 6               |
| 812 | ubiquitin-conjugating enzyme E2 L3  | 4507789          | 18         | 3               | 29                    | 6               |
| 813 | endoplasmic reticulum-Golgi intermediate compartment protein 2              | 50959176         | 43         | 2               | 9.30                  | 6               |
| 814 | eukaryotic translation initiation factor 3 subunit K                        | 10801345         | 25         | 2               | 13                    | 6               |
| 815 | phosphatidylinositol-5-phosphate 4-kinase type-2 gamma isoform a            | 226371739        | 47         | 2               | 7.40                  | 6               |
| 816 | Na(+)/H(+) exchange regulatory cofactor NHE- RF1                            | 4759140          | 39         | 2               | 6.70                  | 6               |
| 817 | perilipin-3 isoform 1   | 255958282        | 47         | 3               | 7.40                  | 6               |
| 818 | dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit DAD1 | 4503253          | 12         | 2               | 19                    | 6               |
| 819 | complement C3 precursor   | 115298678        | 187        | 2               | 1.30                  | 6               |
| 820 | 60S ribosomal protein L13a  | 6912634          | 24         | 2               | 10                    | 6               |
| 821 | solute carrier family 2, facilitated glucose transporter member 5 isoform 1 | 4507013          | 55         | 2               | 6.40                  | 6               |
| 822 | plakophilin-1 isoform 1b  | 53729346         | 83         | 2               | 3.50                  | 6               |
| 823 | lipocalin-15 precursor  | 42714611         | 20         | 2               | 11                    | 6               |
| 824 | ADP-ribosyl cyclase 2 precursor   | 168229159        | 36         | 2               | 7.50                  | 6               |
| 825 | ras-related protein Rab-3B  | 19923750         | 25         | 3               | 17                    | 5               |
| 826 | UPF0468 protein C16orf80  | 8392875          | 23         | 2               | 9.80                  | 5               |
| 827 | 3-mercaptopyruvate sulfurtransferase isoform 2                              | 61835204         | 33         | 2               | 9.10                  | 5               |
| 828 | ras-related protein Ral-B   | 4506405          | 23         | 3               | 23                    | 5               |
| 829 | 60S ribosomal protein L35a  | 16117791         | 13         | 2               | 15                    | 5               |
| 830 | phosphoglycolate phosphatase  | 108796653        | 34         | 2               | 7.20                  | 5               |
| 831 | nicotinamide phosphoribosyltransferase precursor                            | 5031977          | 56         | 3               | 10                    | 5               |
| 832 | Sjogren syndrome nuclear autoantigen 1                                      | 189571687        | 14         | 2               | 20                    | 5               |
| 833 | metaxin-2   | 5729937          | 30         | 3               | 18                    | 5               |
| 834 | prostate and testis expressed protein 4                                     | 221554530        | 11         | 2               | 23                    | 5               |
| 835 | zymogen granule protein 16 homolog B precursor                              | 94536866         | 23         | 2               | 14                    | 5               |
| 836 | dermcidin preproprotein   | 16751921         | 11         | 2               | 23                    | 5               |
| 837 | adenylate kinase 2, mitochondrial isoform a                                 | 4502013          | 26         | 2               | 16                    | 5               |
| 838 | NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 7                 | 10764847         | 16         | 2               | 12                    | 5               |
| 839 | fumarylacetoacetate hydrolase domain- containing protein 2B                 | 40786394         | 35         | 2               | 11                    | 5               |
| 840 | BAG family molecular chaperone regulator 5 isoform b                        | 6631077          | 51         | 3               | 8.70                  | 5               |
| 841 | cystatin-C precursor  | 4503107          | 16         | 2               | 18                    | 5               |
| 842 | actin-related protein 2/3 complex subunit 4 isoform c                       | 311771647        | 22         | 2               | 12                    | 5               |
| 843 | minor histocompatibility antigen H13 isoform 1                              | 23308607         | 41         | 2               | 9.50                  | 5               |
| 844 | spectrin beta chain, brain 1 isoform 1                                      | 112382250        | 275        | 4               | 2.30                  | 5               |
| 845 | prostaglandin E synthase  | 4758910          | 17         | 2               | 13                    | 5               |

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Supplementary Table 6: Contd...

| No  | Protein   | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|---|------------------|------------|-----------------|-----------------------|-----------------|
| 846 | superoxide dismutase [Cu-Zn]  | 4507149          | 16         | 3               | 37                    | 5               |
| 847 | inositol monophosphatase 1 isoform 2                                | 221625487        | 37         | 3               | 13                    | 5               |
| 848 | UPF0733 protein C2orf88   | 110349742        | 11         | 3               | 68                    | 5               |
| 849 | transketolase   | 205277463        | 68         | 3               | 8.30                  | 5               |
| 850 | apolipoprotein D precursor  | 4502163          | 21         | 2               | 13                    | 5               |
| 851 | S-adenosylmethionine synthase isoform type-2                        | 5174529          | 44         | 2               | 7.10                  | 5               |
| 852 | glutathione S-transferase omega-1 isoform 1                         | 4758484          | 28         | 2               | 8.70                  | 5               |
| 853 | HD domain-containing protein 2                                      | 116875826        | 23         | 3               | 17                    | 5               |
| 854 | eukaryotic translation initiation factor 3 subunit I                | 4503513          | 37         | 2               | 8.60                  | 5               |
| 855 | glycyl-tRNA synthetase precursor                                    | 116805340        | 83         | 3               | 8.10                  | 5               |
| 856 | deoxyguanosine kinase, mitochondrial isoform a precursor            | 18426967         | 32         | 2               | 13                    | 5               |
| 857 | UPF0587 protein C1orf123  | 8923541          | 18         | 2               | 25                    | 5               |
| 858 | 6-phosphogluconolactonase   | 6912586          | 28         | 3               | 27                    | 5               |
| 859 | glutathione peroxidase 1 isoform 1                                  | 41406084         | 22         | 2               | 16                    | 5               |
| 860 | nuclear pore glycoprotein p62                                       | 24497605         | 53         | 4               | 11                    | 5               |
| 861 | V-type proton ATPase subunit B, brain isoform                       | 19913428         | 57         | 2               | 4.10                  | 5               |
| 862 | UPF0556 protein C19orf10 precursor                                  | 33457348         | 19         | 3               | 24                    | 5               |
| 863 | AP-1 complex subunit beta-1 isoform a                               | 260436862        | 105        | 2               | 3.70                  | 5               |
| 864 | cartilage acidic protein 1 isoform B precursor                      | 330688397        | 70         | 3               | 4.30                  | 5               |
| 865 | dihydropteridine reductase  | 208973246        | 26         | 3               | 21                    | 5               |
| 866 | SUN domain-containing protein 3                                     | 71834868         | 41         | 2               | 6.70                  | 5               |
| 867 | transforming growth factor beta receptor type 3 isoform b precursor | 307574634        | 93         | 2               | 3.30                  | 5               |
| 868 | 4F2 cell-surface antigen heavy chain isoform c                      | 65506891         | 68         | 3               | 7.10                  | 5               |
| 869 | SPARC-related modular calcium-binding protein 2 isoform 1 precursor | 24308277         | 51         | 3               | 9.00                  | 5               |
| 870 | V-type proton ATPase subunit d 1                                    | 19913432         | 40         | 2               | 6.80                  | 5               |
| 871 | EF-hand domain-containing family member B                           | 148613876        | 94         | 2               | 2.80                  | 5               |
| 872 | mannose-1-phosphate guanylyltransferase beta isoform 1              | 11761619         | 43         | 3               | 12                    | 5               |
| 873 | calumenin isoform a precursor                                       | 4502551          | 37         | 3               | 17                    | 5               |
| 874 | desmocollin-1 isoform Dsc1a preproprotein                           | 13435361         | 100        | 2               | 2.90                  | 5               |
| 875 | guanine nucleotide-binding protein G (k) subunit alpha              | 5729850          | 41         | 2               | 9.60                  | 5               |
| 876 | spermatogenesis-associated protein 19, mitochondrial precursor      | 28376652         | 19         | 2               | 15                    | 4               |
| 877 | izumo sperm-egg fusion protein 2 precursor                          | 63999117         | 25         | 2               | 11                    | 4               |
| 878 | lysozyme-like protein 6 precursor                                   | 9966905          | 17         | 2               | 13                    | 4               |
| 879 | dnaJ homolog subfamily B member 13                                  | 39204547         | 36         | 2               | 7.60                  | 4               |
| 880 | 40S ribosomal protein S19   | 4506695          | 16         | 2               | 13                    | 4               |
| 881 | protein FAM162A   | 49355721         | 17         | 2               | 20                    | 4               |
| 882 | ubiquitin carboxyl-terminal hydrolase 5 isoform 2                   | 148727247        | 93         | 2               | 3.00                  | 4               |
| 883 | proteasome activator complex subunit 2                              | 30410792         | 27         | 2               | 12                    | 4               |
| 884 | vesicle-trafficking protein SEC22b precursor                        | 94429050         | 25         | 2               | 15                    | 4               |
| 885 | ethanolamine-phosphate cytidyltransferase isoform 1                 | 296841136        | 46         | 3               | 11                    | 4               |
| 886 | cytosolic 5'-nucleotidase 1B isoform 4                              | 312283642        | 71         | 2               | 3.00                  | 4               |
| 887 | transmembrane emp24 domain-containing protein 1 precursor           | 5803040          | 25         | 2               | 11                    | 4               |
| 888 | S-formylglutathione hydrolase                                       | 33413400         | 31         | 2               | 16                    | 4               |
| 889 | GTP-binding protein SAR1a   | 217416369        | 22         | 2               | 17                    | 4               |
| 890 | chitinase domain-containing protein 1 isoform a                     | 218083142        | 45         | 2               | 9.70                  | 4               |
| 891 | carboxypeptidase M precursor  | 6631081          | 51         | 2               | 4.10                  | 4               |
| 892 | aspartyl-tRNA synthetase, cytoplasmic                               | 45439306         | 57         | 3               | 7.00                  | 4               |
| 893 | actin-like protein 9  | 194097462        | 46         | 2               | 8.40                  | 4               |
| 894 | aquaporin-5   | 4502183          | 28         | 2               | 9.80                  | 4               |
| 895 | 60S ribosomal protein L27a  | 4506625          | 17         | 2               | 16                    | 4               |
| 896 | protein S100-A12  | 5032059          | 11         | 3               | 38                    | 4               |
| 897 | 60S ribosomal protein L5  | 14591909         | 34         | 3               | 14                    | 4               |
| 898 | cell cycle control protein 50A isoform 1                            | 8922720          | 41         | 2               | 6.90                  | 4               |
| 899 | UPF0740 protein C1orf192  | 63029930         | 19         | 2               | 15                    | 4               |
| 900 | voltage-dependent calcium channel subunit alpha-2/delta-2 isoform c | 291290994        | 130        | 2               | 2.80                  | 4               |

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Supplementary Table 6: Contd...

| No  | Protein   | Accession number | Mass (kDa) | Peptides number | Sequence coverage (%) | Spectral counts |
|-----|---|------------------|------------|-----------------|-----------------------|-----------------|
| 901 | ras GTPase-activating-like protein IQGAP2                                   | 116089337        | 181        | 2               | 1.50                  | 4               |
| 902 | prostate stem cell antigen preproprotein                                    | 289547757        | 12         | 2               | 25                    | 4               |
| 903 | EGF-like repeat and discoidin I-like domain- containing protein 3 precursor | 31317224         | 54         | 2               | 5.60                  | 4               |
| 904 | nuclear transport factor 2  | 5031985          | 14         | 2               | 18                    | 4               |
| 905 | phosphate carrier protein, mitochondrial isoform b precursor                | 47132595         | 40         | 2               | 7.80                  | 4               |
| 906 | prohibitin-2 isoform 2  | 6005854          | 33         | 2               | 9.70                  | 4               |
| 907 | neuropilin-1 isoform a precursor  | 182508169        | 103        | 2               | 4.60                  | 4               |
| 908 | endophilin-A3   | 223468657        | 39         | 2               | 6.10                  | 4               |
| 909 | diablo homolog, mitochondrial isoform 1 precursor                           | 9845297          | 27         | 2               | 8.40                  | 4               |
| 910 | 26S proteasome non-ATPase regulatory subunit 4                              | 5292161          | 41         | 3               | 9.30                  | 4               |
| 911 | choline-phosphate cytidylyltransferase A                                    | 31543385         | 42         | 2               | 8.40                  | 4               |
| 912 | actin-related protein 2/3 complex subunit 2                                 | 23238211         | 34         | 2               | 7.70                  | 4               |
| 913 | methionyl-tRNA synthetase, cytoplasmic                                      | 14043022         | 101        | 2               | 2.40                  | 4               |
| 914 | meiosis-specific nuclear structural protein 1                               | 8922950          | 61         | 2               | 4.20                  | 4               |
| 915 | serine protease 58 precursor  | 48255915         | 27         | 2               | 11                    | 4               |
| 916 | carcinoembryonic antigen-related cell adhesion molecule 8 precursor         | 21314600         | 38         | 2               | 8.30                  | 4               |
| 917 | inosine-5'-monophosphate dehydrogenase 2                                    | 66933016         | 56         | 2               | 6.00                  | 4               |
| 918 | UDP-glucose: glycoprotein glucosyltransferase 1 precursor                   | 9910280          | 177        | 2               | 1.60                  | 4               |
| 919 | peroxisomal multifunctional enzyme type 2 isoform 2                         | 4504505          | 80         | 2               | 5.80                  | 4               |
| 920 | UDP-glucose 6-dehydrogenase isoform 1                                       | 4507813          | 55         | 2               | 8.30                  | 4               |
| 921 | alanyl-tRNA synthetase, cytoplasmic   | 109148542        | 107        | 4               | 5.60                  | 4               |
| 922 | late cornified envelope-like proline-rich protein 1                         | 58082087         | 11         | 2               | 42                    | 4               |
| 923 | 60S ribosomal protein L15 isoform 1   | 15431293         | 24         | 2               | 10                    | 4               |
| 924 | 40S ribosomal protein S17   | 4506693          | 16         | 2               | 27                    | 4               |
| 925 | up-regulated during skeletal muscle growth protein 5                        | 14249376         | 6          | 2               | 43                    | 4               |
| 926 | lipolysis-stimulated lipoprotein receptor isoform 1                         | 45505163         | 70         | 2               | 4.60                  | 4               |
| 927 | protein sel-1 homolog 1 isoform 1 precursor                                 | 19923669         | 89         | 2               | 5.20                  | 4               |
| 928 | non-specific lipid-transfer protein isoform 1 proprotein                    | 19923233         | 59         | 3               | 5.10                  | 4               |
| 929 | F-actin-capping protein subunit alpha-2                                     | 5453599          | 33         | 2               | 12                    | 4               |
| 930 | alpha-galactosidase A precursor   | 4504009          | 49         | 2               | 5.40                  | 4               |
| 931 | sepiapterin reductase   | 4507185          | 28         | 2               | 13                    | 4               |
| 932 | calcium-regulated heat stable protein 1                                     | 109715858        | 16         | 2               | 18                    | 4               |
| 933 | UDP-glucuronic acid decarboxylase 1 isoform 1                               | 359751462        | 48         | 3               | 12                    | 4               |
| 934 | reticulon-4 isoform A   | 24431935         | 130        | 2               | 2.30                  | 4               |
| 935 | surfeit locus protein 4   | 19557691         | 30         | 2               | 10                    | 4               |
| 936 | endothelial lipase precursor  | 5174497          | 57         | 2               | 7.20                  | 4               |
| 937 | BolA-like protein 2   | 73622130         | 17         | 2               | 16                    | 4               |
| 938 | cytosolic Fe-S cluster assembly factor NUBP2                                | 6912540          | 29         | 2               | 20                    | 4               |
| 939 | palmitoyl-protein thioesterase 1 isoform 1 precursor                        | 4506031          | 34         | 2               | 10                    | 4               |
| 940 | ubiquitin-like modifier-activating enzyme 5 isoform 1 [Homo                 | 13376212         | 45         | 2               | 6.20                  | 4               |
| 941 | haptoglobin isoform 2 preproprotein   | 186910296        | 38         | 2               | 7.20                  | 4               |
| 942 | uncharacterized protein C1orf194  | 171916088        | 18         | 2               | 17                    | 3               |
| 943 | 60S ribosomal protein L14   | 78000181         | 23         | 2               | 11                    | 3               |
| 944 | cytochrome c oxidase subunit 6C proprotein                                  | 4758040          | 9          | 2               | 28                    | 3               |
| 945 | brain protein 44-like protein 2   | 306922396        | 15         | 2               | 21                    | 3               |
| 946 | alpha-aminoadipic semialdehyde dehydrogenase isoform 2                      | 319655561        | 55         | 2               | 4.70                  | 3               |
| 947 | arginyl-tRNA synthetase, cytoplasmic  | 15149476         | 75         | 2               | 5.60                  | 3               |
| 948 | cystatin-S precursor  | 4503109          | 16         | 2               | 18                    | 3               |
| 949 | asparaginyl-tRNA synthetase, cytoplasmic                                    | 4758762          | 63         | 2               | 4.90                  | 3               |
| 950 | STE20/SPS1-related proline-alanine-rich protein kinase                      | 115430252        | 59         | 3               | 6.80                  | 3               |
| 951 | catalase  | 4557014          | 60         | 2               | 7.00                  | 3               |
| 952 | UBX domain-containing protein 11 isoform 1                                  | 116734681        | 54         | 2               | 7.60                  | 3               |
| 953 | thioredoxin reductase 2, mitochondrial precursor                            | 22035672         | 57         | 2               | 8.60                  | 3               |
| 954 | 5-oxoprolinase  | 48314820         | 137        | 2               | 2.30                  | 3               |
| 955 | nucleophosmin isoform 1   | 10835063         | 33         | 2               | 9.50                  | 3               |

Contd...

**Supplementary Table 6: Contd...**

| <i>No</i> | <i>Protein</i>  | <i>Accession number</i> | <i>Mass (kDa)</i> | <i>Peptides number</i> | <i>Sequence coverage (%)</i> | <i>Spectral counts</i> |
|-----------|---|-------------------------|-------------------|------------------------|------------------------------|------------------------|
| 956       | amyloid beta A4 protein isoform d                                   | 209862833               | 85                | 2                      | 3.50                         | 3                      |
| 957       | ras-related protein Rab-6A isoform b                                | 38679888                | 24                | 2                      | 12                           | 3                      |
| 958       | V-type proton ATPase subunit E 1 isoform a                          | 4502317                 | 26                | 2                      | 12                           | 3                      |
| 959       | glutaminyl-peptide cyclotransferase precursor                       | 6912618                 | 41                | 2                      | 6.90                         | 3                      |
| 960       | DNA damage-binding protein 1  | 148529014               | 127               | 2                      | 1.80                         | 3                      |
| 961       | nodal modulator 3 precursor   | 51944969                | 134               | 2                      | 2.00                         | 3                      |
| 962       | aladin isoform 1  | 12962937                | 60                | 2                      | 4.00                         | 3                      |
| 963       | prefoldin subunit 2   | 12408675                | 17                | 2                      | 17                           | 3                      |
| 964       | UV excision repair protein RAD23 homolog B isoform 1                | 4506387                 | 43                | 3                      | 14                           | 3                      |
| 965       | syntaxin-3 isoform 1  | 4759184                 | 33                | 2                      | 7.60                         | 3                      |
| 966       | cysteine-rich protein 2   | 4503049                 | 22                | 2                      | 25                           | 3                      |
| 967       | vesicle transport protein GOT1B                                     | 7705636                 | 15                | 2                      | 20                           | 3                      |
| 968       | dipeptidyl peptidase 2 preproprotein                                | 62420888                | 54                | 2                      | 7.90                         | 3                      |
| 969       | sulfotransferase 1A1 isoform a                                      | 29540539                | 34                | 2                      | 11                           | 3                      |
| 970       | bactericidal permeability-increasing protein precursor              | 157276599               | 54                | 2                      | 5.30                         | 3                      |
| 971       | NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 5        | 4826848                 | 13                | 2                      | 22                           | 2                      |
| 972       | lipase member I   | 39752679                | 55                | 2                      | 4.20                         | 2                      |
| 973       | S-phase kinase-associated protein 1 isoform b                       | 25777713                | 19                | 2                      | 18                           | 2                      |
| 974       | eukaryotic translation initiation factor 3 subunit M                | 23397429                | 43                | 2                      | 8.00                         | 2                      |
| 975       | ADP-ribosylation factor 6   | 4502211                 | 20                | 2                      | 13                           | 2                      |
| 976       | transketolase-like protein 1 isoform b                              | 225637461               | 65                | 2                      | 5.10                         | 2                      |
| 977       | purine nucleoside phosphorylase                                     | 157168362               | 32                | 2                      | 11                           | 2                      |
| 978       | PITH domain-containing protein 1                                    | 21361837                | 24                | 2                      | 16                           | 2                      |
| 979       | carnitine O-acetyltransferase precursor                             | 21618331                | 71                | 2                      | 4.20                         | 2                      |
| 980       | exportin-2  | 29029559                | 110               | 2                      | 2.40                         | 2                      |
| 981       | dipeptidase 1 precursor   | 4758190                 | 46                | 2                      | 10.00                        | 2                      |
| 982       | isoleucyl-tRNA synthetase, cytoplasmic                              | 94721239                | 145               | 2                      | 2.10                         | 2                      |
| 983       | tyrosyl-tRNA synthetase, cytoplasmic                                | 4507947                 | 59                | 2                      | 8.10                         | 2                      |
| 984       | coatamer subunit beta'  | 4758032                 | 102               | 2                      | 3.30                         | 2                      |
| 985       | translation initiation factor eIF-2B subunit alpha                  | 4503503                 | 34                | 2                      | 9.20                         | 2                      |
| 986       | low molecular weight phosphotyrosine protein phosphatase isoform c  | 4757714                 | 18                | 2                      | 15                           | 2                      |
| 987       | coiled-coil domain-containing protein 40 isoform 1                  | 148664197               | 130               | 2                      | 2.60                         | 2                      |
| 988       | actin-related protein 2/3 complex subunit 3                         | 5031597                 | 21                | 2                      | 13                           | 2                      |
| 989       | AMY-1-associating protein expressed in testis 1                     | 38569419                | 90                | 2                      | 3.70                         | 2                      |
| 990       | monocarboxylate transporter 1                                       | 262073007               | 54                | 2                      | 6.40                         | 2                      |
| 991       | dual specificity mitogen-activated protein kinase kinase 1          | 5579478                 | 43                | 2                      | 5.10                         | 2                      |
| 992       | collagen alpha-1(II) chain isoform 2 precursor                      | 111118974               | 134               | 2                      | 1.30                         | 2                      |
| 993       | condensin complex subunit 1   | 178056552               | 157               | 2                      | 4.40                         | 2                      |
| 994       | keratinocyte proline-rich protein                                   | 68563515                | 64                | 2                      | 3.60                         | 2                      |
| 995       | calcyphosin isoform a   | 4757908                 | 21                | 2                      | 12                           | 2                      |
| 996       | galectin-3 isoform 1  | 115430223               | 26                | 2                      | 11                           | 2                      |
| 997       | sorting nexin-9   | 7706706                 | 67                | 2                      | 7.20                         | 2                      |
| 998       | cysteine-rich secretory protein LCCL domain- containing 2 precursor | 13899332                | 56                | 2                      | 7.00                         | 2                      |
| 999       | UBX domain-containing protein 1                                     | 21361517                | 35                | 2                      | 6.10                         | 2                      |