**Table S1:** The information of identification of differential proteins in *Ricinus communis L*. inflorescences by mass spectrometry (MS) analysis

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spot no. a | Homologous protein b | Species c | Accession d | Theor pI/Mr e | score f | C (%) g | PN h | Peptide sequence j | Observed m/z k |
| **unfolded protein** | | | | | | | | | |
| 1 | Heat shock protein | *Ricinus communis* | XP\_002526446.1 | 5.35/75.43 | 498 | 18 | 10 | K.QFAAEEISAQVLR.K | 1460.8789 |
|  |  |  |  |  |  |  |  | K.AVVTVPAYFNDSQR.T | 1565.9101 |
|  |  |  |  |  |  |  |  | R.IVDWLAGNFKR.D | 1349.8141 |
|  |  |  |  |  |  |  |  | K.HIETTITR.A | 969.5943 |
|  |  |  |  |  |  |  |  | R.AKFEELCSDLLDR.L | 1594.8943 |
|  |  |  |  |  |  |  |  | K.LSFKDIDEVILVGGSTR.I | 1848.1496 |
|  |  |  |  |  |  |  |  | K.DIDEVILVGGSTR.I | 1372.8291 |
|  |  |  |  |  |  |  |  | K.SEVFSTAADGQTSVEINVLQGER.E | 2436.3753 |
|  |  |  |  |  |  |  |  | R.LDGIPPAPR.G | 934.5941 |
|  |  |  |  |  |  |  |  | K.KQDITITGASTLPSDEVER.M | 2059.2171 |
| 20 | Heat shock protein | *Ricinus communis* | XP\_002518324.1 | 6.1/71.3 | 555 | 18 | 9 | K.AVITVPAYFNDAQR.Q | 1564.8960 |
|  |  |  |  |  |  |  |  | K.DVDEVLLVGGMTR.V | 1403.7903 |
|  |  |  |  |  |  |  |  | K.DVDEVLLVGGMTR.V | 1419.7855 |
|  |  |  |  |  |  |  |  | K.VQEIVSEIFGK.S | 1248.7402 |
|  |  |  |  |  |  |  |  | K.GVNPDEAVAMGAAIQGGILR.G | 1939.1163 |
|  |  |  |  |  |  |  |  | K.SQVFSTAADNQTQVGIK.V | 1792.9970 |
|  |  |  |  |  |  |  |  | K.LLGEFELVGIPPAPR.G | 1608.0033 |
|  |  |  |  |  |  |  |  | K.EAELFAQKDQER.K | 1463.7871 |
|  |  |  |  |  |  |  |  | K.IPAETAKEIEDSLADLR.T | 1871.0800 |
| 21 | Heat shock protein 70 | *Ricinus communis* | XP\_002509580.1 | 5.6/65.39 | 119 | 15 | 7 | K.GNAAFSAGDFTTAVK.H | 1456.7969 |
|  |  |  |  |  |  |  |  | K.HFTEAISIAPSNHVLYSNR.S | 2156.2351 |
|  |  |  |  |  |  |  |  | K.ELEQQEYFDPK.L | 1425.7402 |
|  |  |  |  |  |  |  |  | K.LGALPEGLKDAEK.C | 1340.8104 |
|  |  |  |  |  |  |  |  | R.GDLSPEELKER.Q | 1272.7181 |
|  |  |  |  |  |  |  |  | R.QVLVDFQENPK.S | 1316.7297 |
|  |  |  |  |  |  |  |  | K.LVNAGIVQIR.- | 1082.7251 |
| 68 | Heat shock protein | *Ricinus communis* | XP\_002527736.1 | 5.14/71.28 | 394 | 20 | 10 | R.TTPSYVAFTDTER.L | 1487.7789 |
|  |  |  |  |  |  |  |  | K.NQVAMNPVNTVFDAKR.L | 1820.0237 |
|  |  |  |  |  |  |  |  | K.MREIAEAYLGSTVK.N | 1567.8961 |
|  |  |  |  |  |  |  |  | K.NAVVTVPAYFNDSQR.Q | 1680.9270 |
|  |  |  |  |  |  |  |  | K.DAGVIAGLNVMR.I | 1231.7009 |
|  |  |  |  |  |  |  |  | R.IINEPTAAAIAYGLDKK.A | 1788.0918 |
|  |  |  |  |  |  |  |  | K.STVHDVVLVGGSTR.I | 1426.8394 |
|  |  |  |  |  |  |  |  | K.EQVFSTYSDNQPGVLIQVYEGER.T | 2658.4448 |
|  |  |  |  |  |  |  |  | K.NALENYAYNMR.N | 1358.6796 |
|  |  |  |  |  |  |  |  | K.NALENYAYNMR.N | 1374.6763 |
| **Transport** | | | | | | | | | |
| 5 | Ran binding protein | *Ricinus communis* | XP\_002530503.1 | 4.61/19.85 | 87 | 18 | 3 | K.LEEVAVSTGEEDEDSILDLKAK.L | 2390.3188 |
|  |  |  |  |  |  |  |  | R.KEAEDAAGLLEK.L | 1273.7324 |
|  |  |  |  |  |  |  |  | K.EAEDAAGLLEK.L | 1145.6315 |
| 24 | Glutathione-s-transferase omega | *Ricinus communis* | XP\_002525204.1 | 5.13/27.48 | 392 | 59 | 10 | K.SAQENLPPILDAAADQPPLFDGTIR.L | 2649.4688 |
|  |  |  |  |  |  |  |  | R.LYTAYACPFAQR.V | 1460.7423 |
|  |  |  |  |  |  |  |  | K.LVPLNLQNRPSWYPEK.V | 1986.1205 |
|  |  |  |  |  |  |  |  | K.VYSVNKVPALEHNGK.I | 1655.9305 |
|  |  |  |  |  |  |  |  | K.IIGESLDLIK.Y | 1100.6790 |
|  |  |  |  |  |  |  |  | K.YVDSNFEGPSLFPDDPAKR.E | 2154.0874 |
|  |  |  |  |  |  |  |  | R.EFAEELFSYTDTFSR.T | 1841.8896 |
|  |  |  |  |  |  |  |  | R.TVFTSFKGDVAK.E | 1299.7201 |
|  |  |  |  |  |  |  |  | K.LAAWVGEVNK.I | 1086.6123 |
|  |  |  |  |  |  |  |  | K.TDPKELVEYYK.K | 1384.7375 |
| 28 | Protein transport protein sec13 | *Ricinus communis* | XP\_002515980.1 | 5.72/33.05 | 270 | 27 | 8 | K.IIGVSNNTSQQLAK.L | 1472.8489 |
|  |  |  |  |  |  |  |  | K.LTGHQGPVWQVAWAHPK.F | 1976.0546 |
|  |  |  |  |  |  |  |  | K.FGSLLASCSYDGR.V | 1432.6968 |
|  |  |  |  |  |  |  |  | R.DVAWAPNLGLPK.S | 1280.7278 |
|  |  |  |  |  |  |  |  | K.VIIWTVAK.E | 929.5815 |
|  |  |  |  |  |  |  |  | K.EGDQWEGK.V | 948.4176 |
|  |  |  |  |  |  |  |  | K.VLHDFKSPVWR.V | 1383.7938 |
|  |  |  |  |  |  |  |  | K.VLHDFKSPVWR.V | 1415.7834 |
| 38 | Nuclear transport factor 2B | *Ricinus communis* | XP\_002514900.1 | 6.01/13.67 | 154 | 48 | 5 | -.MDPDAVAK.A | 904.4566 |
|  |  |  |  |  |  |  |  | K.AFVEHYYTTFDANR.A | 1733.9241 |
|  |  |  |  |  |  |  |  | R.AGLANLYQEASMLTFEGQK.I | 2087.1963 |
|  |  |  |  |  |  |  |  | K.IQGAQNVVAK.L | 1027.6472 |
|  |  |  |  |  |  |  |  | K.LTGEQHALK.F | 996.6013 |
| 52 | Ran binding protein | *Ricinus communis* | XP\_002530503.1 | 4.61/18.95 | 202 | 25 | 4 | K.LEEVAVSTGEEDEDSILDLKAK.L | 2390.2249 |
|  |  |  |  |  |  |  |  | R.FDKEGNQWK.E | 1151.5424 |
|  |  |  |  |  |  |  |  | K.EGNQWKER.G | 1046.4974 |
|  |  |  |  |  |  |  |  | R.KEAEDAAGLLEK.L | 1273.6678 |
| 89 | Glutathione s-transferase | *Ricinus communis* | XP\_002532823.1 | 5.42/25.63 | 306 | 22 | 5 | M.ADEVILLDFWASPFGMR.V + Acetyl | |  |  | | --- | --- | | 2009.1497 |  | |
|  |  |  |  |  |  |  |  | M.ADEVILLDFWASPFGMR.V + Acetyl | |  |  | | --- | --- | | 2025.1415 |  | |
|  |  |  |  |  |  |  |  | R.NKSPLLLEMNPVHK.K+ Oxidation | 1636.0249 |
|  |  |  |  |  |  |  |  | R.FWADFVDKK.I | 1155.6553 |
|  |  |  |  |  |  |  |  | K.VYEFVLELK.K | |  |  | | --- | --- | | 1139.7090 |  | |
| **Binding Protein** | | | | | | | | | |
| 2 | ruBisCO large subunit-binding protein | *Ricinus communis* | XP\_002534347.2 | 5.14/59.1 | 301 | 20 | 10 | K.LADAVGLTLGPR.G | 1182.7531 |
|  |  |  |  |  |  |  |  | R.NVVLDEFGSPK.V | 1204.6910 |
|  |  |  |  |  |  |  |  | K.VVNDGVTIAR.A | 1043.6450 |
|  |  |  |  |  |  |  |  | R.AIELPDPMENAGAALIR.E | 1781.0419 |
|  |  |  |  |  |  |  |  | R.AIELPDPMENAGAALIR.E | 1797.0460 |
|  |  |  |  |  |  |  |  | K.TVQGLIEELEKK.A | 1386.8673 |
|  |  |  |  |  |  |  |  | R.GYISPQFVTNPEK.L | 1479.8397 |
|  |  |  |  |  |  |  |  | K.LICEFENAR.V | 1151.6161 |
|  |  |  |  |  |  |  |  | K.DSTTLIADAASKDELQAR.I | 1905.0851 |
|  |  |  |  |  |  |  |  | K.VGAATETELEDR.K | 1290.6904 |
| 3 | Rubisco subunit binding-protein beta subunit | *Ricinus communis* | XP\_002523404.1 | 6.65/64.49 | 242 | 18 | 8 | K.VVAAGANPVLITR.G | 1280.8440 |
|  |  |  |  |  |  |  |  | K.SAENSLYVVEGMQFDR.G | 1844.9751 |
|  |  |  |  |  |  |  |  | K.SAENSLYVVEGMQFDR.G | 1860.9707 |
|  |  |  |  |  |  |  |  | R.GYISPYFVTDSEK.M | 1505.8104 |
|  |  |  |  |  |  |  |  | K.DTTTIVGDGSTQEAVTKR.V | 1879.0648 |
|  |  |  |  |  |  |  |  | K.LSGGVAVIQVGAQTETELKEK.K | 2157.3325 |
|  |  |  |  |  |  |  |  | K.LRVEDALNATK.A | 1229.7648 |
|  |  |  |  |  |  |  |  | K.AAVEEGIVVGGGCTLLR.L | 1701.0129 |
| 4 | Ribulose bisphosphat carboxylase/oxygenase activase 1 | *Ricinus communis* | XP\_002524206.1 | 5.35/52.19 | 271 | 23 | 9 | K.FYWAPTREDR.I | 1340.7151 |
|  |  |  |  |  |  |  |  | K.FYWAPTREDR.I | 1372.7087 |
|  |  |  |  |  |  |  |  | K.LVDTFPGQSIDFFGALR.A | 1883.0853 |
|  |  |  |  |  |  |  |  | R.VYDDEVRK.W | 1023.5618 |
|  |  |  |  |  |  |  |  | K.EGPPTFEQPK.M | 1129.6112 |
|  |  |  |  |  |  |  |  | K.LLEYGNMLVQEQENVKR.V | 2063.1936 |
|  |  |  |  |  |  |  |  | K.LLEYGNMLVQEQENVKR.V | 2079.1855 |
|  |  |  |  |  |  |  |  | R.VQLADKYMSEAALGEANQDSIER.G | 2538.3850 |
|  |  |  |  |  |  |  |  | K.AAQQVNIPVPEGCTDPTAQNFDPTAR.S | 2797.5115 |
| 10 | Ribulose bisphosphat carboxylase/oxygenase activase 2 | *Ricinus communis* | XP\_015577917.1 | 5.56/48.12 | 391 | 28 | 9 | R.WGGLAYDMSDDQQDITR.G | 1986.9340 |
|  |  |  |  |  |  |  |  | K.SFQCELVFAK.M | 1228.6460 |
|  |  |  |  |  |  |  |  | R.VPIIVTGNDFSTLYAPLIR.D | 2089.2610 |
|  |  |  |  |  |  |  |  | K.FYWAPTREDR.I | 1340.6830 |
|  |  |  |  |  |  |  |  | K.LVDTFPGQSIDFFGALR.A | 1883.0474 |
|  |  |  |  |  |  |  |  | R.VYDDEVRK.W | 1023.5427 |
|  |  |  |  |  |  |  |  | K.WIGGVGVEK.I | 944.5503 |
|  |  |  |  |  |  |  |  | K.EGPPTFEQPK.M | 1129.5889 |
|  |  |  |  |  |  |  |  | R.VQLADKYMSEAALGEANQDSIER.G | 2554.3342 |
| 13 | 14-3-3 protein | *Ricinus communis* | XP\_002513928.1 | 4.78/29.1 | 293 | 22 | 9 | K.EREQQVYTAR.L | 1279.6628 |
|  |  |  |  |  |  |  |  | R.EQQVYTAR.L | 994.5116 |
|  |  |  |  |  |  |  |  | K.VAKLDVELTVEER.N | 1500.8591 |
|  |  |  |  |  |  |  |  | K.LDVELTVEER.N | 1202.6478 |
|  |  |  |  |  |  |  |  | K.MKGDYYR.Y | 932.4464 |
|  |  |  |  |  |  |  |  | K.MKGDYYR.Y | 948.4442 |
|  |  |  |  |  |  |  |  | R.DNLTLWTSDLPEEGGEQSKGDEPQAEN.- | 2959.4084 |
| 14 | Oxygen-evolving enhancer protein 1 | *Ricinus communis* | XP\_002522386.1 | 5.58/34.45 | 613 | 40 | 9 | K.RLTFDEIQSK.T | 1236.6808 |
|  |  |  |  |  |  |  |  | K.GTGTANQCPTIDGGLDKFSFK.A | 2214.0994 |
|  |  |  |  |  |  |  |  | K.KFCLEPTSFTVK.A | 1456.7769 |
|  |  |  |  |  |  |  |  | K.FCLEPTSFTVK.A | 1328.6782 |
|  |  |  |  |  |  |  |  | K.NAPPEFQNTK.L | 1145.5763 |
|  |  |  |  |  |  |  |  | K.FEEKDGIDYAAVTVQLPGGER.V | 2294.1892 |
|  |  |  |  |  |  |  |  | R.VPFLFTIK.Q | 964.6000 |
|  |  |  |  |  |  |  |  | K.QLVATGKPESFSGEFLVPSYR.G | 2312.2476 |
|  |  |  |  |  |  |  |  | K.ITLSVTGSKPETGEIIGVFESVQPSDTDLGAK.T | 3275.7795 |
| 18 | Heat shock 70 kDa protein | *Ricinus communis* | XP\_002528199.1 | 5.22/94.33 | 193 | 15 | 9 | M.SVVGFDLGNESCIVAVAR.Q | 1935.1082 |
|  |  |  |  |  |  |  |  | R.QFSDPELQKDLK.S | 1447.8438 |
|  |  |  |  |  |  |  |  | K.SLPFAVTEGPDGFPLIHAR.Y | 2024.2112 |
|  |  |  |  |  |  |  |  | K.ILAHAYDR.S | 958.5715 |
|  |  |  |  |  |  |  |  | K.ILTEFFGKEPR.R | 1336.8187 |
|  |  |  |  |  |  |  |  | K.GAAPDAQSGAADNQQSTIVFPK.G | 2173.2173 |
|  |  |  |  |  |  |  |  | R.ISTYTIGPFQSSTSER.A | 1773.9943 |
|  |  |  |  |  |  |  |  | K.VLNECVEAEAWLR.E | 1588.8901 |
|  |  |  |  |  |  |  |  | K.YASPVLLSADVR.K | 1290.7925 |
| 22 | Protein binding protein | *Ricinus communis* | XP\_002524159.1 | 4.83/56.24 | 168 | 20 | 7 | R.LSIVTFSGDAR.R | 1165.6892 |
|  |  |  |  |  |  |  |  | K.TGLNVLNDRR.L | 1157.7052 |
|  |  |  |  |  |  |  |  | K.AIAQNSVGGTFSDVQNTDNLSK.A | 2266.2563 |
|  |  |  |  |  |  |  |  | K.VIVDLLLLAVDKER.G | 1596.0715 |
|  |  |  |  |  |  |  |  | K.LFEAPPATITVSR.T | 1401.8556 |
|  |  |  |  |  |  |  |  | R.TGTSLDQEERPEVLTEETR.L | 2190.1951 |
|  |  |  |  |  |  |  |  | K.QGRPFALSSETSHDR.Q | 1687.9231 |
| 34 | Ubiquitin-conjugating enzyme rad6 | *Ricinus communis* | XP\_002520127.1 | 5.4/14.75 | 193 | 23 | 5 | K.LTLQFTEDYPNKPPTVR.F | 2019.1044 |
|  |  |  |  |  |  |  |  | R.MFSENKR.E | 911.4425 |
|  |  |  |  |  |  |  |  | R.MFSENKR.E | 927.4373 |
|  |  |  |  |  |  |  |  | R.VREIVEQSWTAD.- | 1432.7288 |
|  |  |  |  |  |  |  |  | R.VREIVEQSWTAD.- | 1464.7239 |
| 37 | 14-3-3 protein | *Ricinus communis* | XP\_002523376.1 | 4.74/29.6 | 241 | 19 | 5 | K.DRETFVYVAK.L | 1227.6438 |
|  |  |  |  |  |  |  |  | K.VAKLDVELTVEER.N | 1500.8406 |
|  |  |  |  |  |  |  |  | K.LDVELTVEER.N | 1202.6328 |
|  |  |  |  |  |  |  |  | K.MKGDYYR.Y | 932.4302 |
|  |  |  |  |  |  |  |  | K.AYETASTTAESELPPTHPIR.L | 2171.0886 |
| 39 | Oxygen-evolving enhancer protein 1 | *Ricinus communis* | XP\_002522386.1 | 5.58/34.45 | 186 | 20 | 6 | K.RLTFDEIQSK.T | 1236.7310 |
|  |  |  |  |  |  |  |  | K.NAPPEFQNTK.L | 1145.6284 |
|  |  |  |  |  |  |  |  | K.FEEKDGIDYAAVTVQLPGGER.V | 2294.3022 |
|  |  |  |  |  |  |  |  | K.DGIDYAAVTVQLPGGER.V | 1760.9886 |
|  |  |  |  |  |  |  |  | R.VPFLFTIK.Q | 964.6402 |
|  |  |  |  |  |  |  |  | K.QLVATGKPESFSGEFLVPSYR.G | 2312.3379 |
| 40 | Transitional endoplasmic reticulum ATPase | *Ricinus communis* | XP\_002519500.1 | 5.13/90.35 | 269 | 13 | 9 | R.DFSTAILER.K | 1051.5964 |
|  |  |  |  |  |  |  |  | R.KGDLFLVR.G | 947.6185 |
|  |  |  |  |  |  |  |  | R.ELVELPLR.H | 968.6276 |
|  |  |  |  |  |  |  |  | R.ETVVEVPNVSWEDIGGLENVKR.E | 2501.4102 |
|  |  |  |  |  |  |  |  | R.ELQETVQYPVEHPEKFEK.F | 2230.2432 |
|  |  |  |  |  |  |  |  | R.LDQLIYIPLPDEDSR.H | 1787.0371 |
|  |  |  |  |  |  |  |  | K.YTQGFSGADITEICQR.A | 1845.9565 |
|  |  |  |  |  |  |  |  | R.KYQAFAQTLQQSR.G | 1568.9099 |
|  |  |  |  |  |  |  |  | K.YQAFAQTLQQSR.G | 1440.8060 |
| 50 | ATP binding protein | *Ricinus communis* | XP\_002526500.1 | 8.6/15.18 | 87 | 27 | 3 | R.VLIRLDELPEK.S | 1324.7964 |
|  |  |  |  |  |  |  |  | R.LDELPEKSSGGVLLPK.S | 1681.9517 |
|  |  |  |  |  |  |  |  | K.VLFSDINAYEVDLGTDAK.H | 1970.0229 |
| 53 | 14-3-3 protein | *Ricinus communis* | XP\_002523376.1 | 4.76/29.63 | 266 | 19 | 5 | K.DRETFVYVAK.L | 1227.6276 |
|  |  |  |  |  |  |  |  | K.VAKLDVELTVEER.N | 1500.8293 |
|  |  |  |  |  |  |  |  | K.LDVELTVEER.N | 1202.6208 |
|  |  |  |  |  |  |  |  | K.MKGDYYR.Y | 932.4190 |
|  |  |  |  |  |  |  |  | K.AYETASTTAESELPPTHPIR.L | 2171.0857 |
| 59 | Groes chaperonin | *Ricinus communis* | XP\_002516232.1 | 8.89/26.58 | 529 | 31 | 6 | K.YTSIKPLGDR.V | 1149.7156 |
|  |  |  |  |  |  |  |  | K.VAEEKTDGGILLPTSAQTKPQGGEVVAVGEGR.T | 3193.9709 |
|  |  |  |  |  |  |  |  | K.TDGGILLPTSAQTKPQGGEVVAVGEGR.T | 2637.6392 |
|  |  |  |  |  |  |  |  | K.IADAEEKTAGGLLLTEATK.E | 1931.2125 |
|  |  |  |  |  |  |  |  | K.YAGNDFKGSDGTNYIALR.A | 1962.1152 |
|  |  |  |  |  |  |  |  | K.GSDGTNYIALR.A | 1166.6687 |
| 62 | Tubulin-specific chaperone A | *Ricinus communis* | **XP\_002523979.1** | 4.91/12.89 | 72 | 23 | 4 | K.GADPYDLKQQENVLAESR.M | 2033.1471 |
|  |  |  |  |  |  |  |  | R.MMIPDCR.K | 922.4439 |
|  |  |  |  |  |  |  |  | R.MMIPDCR.K | 938.4399 |
|  |  |  |  |  |  |  |  | R.MMIPDCRK.R | 1066.5422 |
| 69 | Actin | *Ricinus communis* | XP\_002522194.1 | 5.31/41.9 | 673 | 37 | 10 | K.AGFAGDDAPR.A | 976.4777 |
|  |  |  |  |  |  |  |  | R.AVFPSIVGRPR.H | 1198.7460 |
|  |  |  |  |  |  |  |  | K.DAYVGDEAQSKR.G | 1338.6786 |
|  |  |  |  |  |  |  |  | K.IWHHTFYNELR.V | 1547.8330 |
|  |  |  |  |  |  |  |  | R.VAPEEHPVLLTEAPLNPK.A | 1954.1521 |
|  |  |  |  |  |  |  |  | R.TTGIVLDSGDGVSHTVPIYEGYALPHAILR.L | 3151.8220 |
|  |  |  |  |  |  |  |  | R.GYMFTTTAER.E | 1176.5750 |
|  |  |  |  |  |  |  |  | K.LAYVALDYEQELETAK.S | 1856.0145 |
|  |  |  |  |  |  |  |  | K.SSSSVEKNYELPDGQVITIGAER.F | 2479.3530 |
|  |  |  |  |  |  |  |  | K.NYELPDGQVITIGAER.F | 1774.9742 |
| 83 | Uncharacterized protein | *Ricinus communis* | XP\_002524472.1 | 5.27/14.55 | 130 | 25 | 4 | -.MEEITEGVNNINLAGDLHK.K | 2155.0859 |
|  |  |  |  |  |  |  |  | -.MEEITEGVNNINLAGDLHKK.N | 2267.1816 |
|  |  |  |  |  |  |  |  | K.IMTSTVDMKDESR.G | 1512.7087 |
|  |  |  |  |  |  |  |  | K.IMTSTVDMKDESR.G | 1544.7156 |
| 85 | Glycine-rich RNA-binding protein | *Ricinus communis* | XP\_002526922.1 | 7.79/16.56 | 88 | 49 | 8 | M.AAADIEYR.C | 950.5280 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | K.IINDRETGR.S | 1073.6505 |
|  |  |  |  |  |  |  |  | R.SRGFGFVTFNNEK.S | 1502.8738 |
|  |  |  |  |  |  |  |  | R.GFGFVTFNNEK.S | 1259.7070 |
|  |  |  |  |  |  |  |  | R.NITVNEAQSR.G | 1131.6647 |
|  |  |  |  |  |  |  |  | R.NGGGGGYGGGRR.E | 1064.5760 |
|  |  |  |  |  |  |  |  | R.EGGYGGGGGYSR.G | 1116.5535 |
|  |  |  |  |  |  |  |  | R.GGGGYGGGGGGYGGGRDR.G | 1513.7886 |
| 88 | annexin | *Ricinus communis* | XP\_015582143.1 | 5.76/29.4 | 169 | 31 | 7 | M.ATLKVPAHVPPPSEDAEQLHK.A | 2306.4363 |
|  |  |  |  |  |  |  |  | K.TYYEAYGEDLLK.T | 1464.8010 |
|  |  |  |  |  |  |  |  | K.TLDKELSSDFER.A | 1439.8091 |
|  |  |  |  |  |  |  |  | R.SSLELFKVR.Q | 1078.6980 |
|  |  |  |  |  |  |  |  | K.SLEEDVAHHTTGDFR.K | 1713.9149 |
|  |  |  |  |  |  |  |  | K.SLEEDVAHHTTGDFRK.L | 1842.0280 |
|  |  |  |  |  |  |  |  | K.ISDKAYNNEEIIR.I | 1564.9144 |
| **Organelle structure** | | | | | | | | | |
| 64 | 40S ribosomal protein S12 | *Ricinus communis* | XP\_002521598.1 | 5.54/14.55 | 382 | 50 | 6 | R.KSLAHGGLIR.G | 1051.6770 |
|  |  |  |  |  |  |  |  | K.SLAHGGLIR.G | 923.5757 |
|  |  |  |  |  |  |  |  | K.NAAQLCVIAEDCNQPDYVK.L | 2208.1411 |
|  |  |  |  |  |  |  |  | K.GICADHGVGLLTVPSAK.T | 1694.9791 |
|  |  |  |  |  |  |  |  | K.TLGEWAGLCK.I | 1166.6030 |
|  |  |  |  |  |  |  |  | K.DYGEESEGLNVVQQHIK.S | 1945.0439 |
| 41 | phospholipase D alpha | *Ricinus communis* | XP\_002517625.1 | 5.5/92.39 | 299 | 17 | 10 | R.ILENEQSNPR.W | 1199.6537 |
|  |  |  |  |  |  |  |  | K.DRNWGQGIR.S | 1101.5917 |
|  |  |  |  |  |  |  |  | K.YPGVPYTYFSQR.Q | 1477.7892 |
|  |  |  |  |  |  |  |  | R.RPKPGGDITLGELLK.K | 1594.0160 |
|  |  |  |  |  |  |  |  | R.TLDSAHHDDFHQPNFAGASIEK.G | 2437.2615 |
|  |  |  |  |  |  |  |  | R.LEGPIAWDVLFNFEQR.W | 1966.0826 |
|  |  |  |  |  |  |  |  | R.SIDGGAAFGFPETPEDAAR.A | 1907.9814 |
|  |  |  |  |  |  |  |  | R.AGLVSGKDNIIDR.S | 1357.8043 |
|  |  |  |  |  |  |  |  | R.SIQDAYIHAIR.R | 1286.7444 |
|  |  |  |  |  |  |  |  | K.SGEYEPAEKPEPDTDYIR.A | 2096.0652 |
| **Cellular protein catabolic** | | | | | | | | | |
| 32 | Proteasome subunit beta type | *Ricinus communis* | XP\_002527995.1 | 5.17/24.91 | 311 | 29 | 6 | R.TSTGMYVANR.A | 1099.5419 |
|  |  |  |  |  |  |  |  | R.TSTGMYVANR.A | 1115.5427 |
|  |  |  |  |  |  |  |  | R.ASDKITQLTDNVYVCR.S | 1882.9841 |
|  |  |  |  |  |  |  |  | R.SGSAADSQIVSDYVR.Y | 1554.7795 |
|  |  |  |  |  |  |  |  | R.YFLHQHTIQLGQPATVK.V | 1981.1248 |
|  |  |  |  |  |  |  |  | R.TVIINSEGVTR.N | 1188.6865 |
| 47 | Proteasome subunit beta type | *Ricinus communis* | XP\_002527995.1 | 5.17/24.91 | 186 | 29 | 6 | R.TSTGMYVANR.A | 1099.5405 |
|  |  |  |  |  |  |  |  | R.TSTGMYVANR.A | 1115.5375 |
|  |  |  |  |  |  |  |  | R.ASDKITQLTDNVYVCR.S | 1882.9895 |
|  |  |  |  |  |  |  |  | R.SGSAADSQIVSDYVR.Y | 1554.7800 |
|  |  |  |  |  |  |  |  | R.YFLHQHTIQLGQPATVK.V | 1981.1174 |
|  |  |  |  |  |  |  |  | R.TVIINSEGVTR.N | 1188.6852 |
| 57 | 26S proteasome non-atpase regulatory subunit | *Ricinus communis* | XP\_002518856.1 | 4.87/30.79 | 178 | 12 | 3 | K.ITEASQLFER.F | 1193.7183 |
|  |  |  |  |  |  |  |  | R.DIYEHAVLLNVK.I | 1413.9110 |
|  |  |  |  |  |  |  |  | K.AYDYLSINDAR.Q | 1300.7352 |
| **Energy metabolism** | | | | | | | | | |
| 27 | Thioredoxin reductase | *Ricinus communis* | XP\_002528522.1 | 8.2/39.6 | 449 | 35 | 9 | R.VCIVGSGPAAHTAAIYAAR.A | 1885.0361 |
|  |  |  |  |  |  |  |  | K.RLNFAGSDTFWNR.G | 1615.8116 |
|  |  |  |  |  |  |  |  | R.LNFAGSDTFWNR.G | 1459.7028 |
|  |  |  |  |  |  |  |  | R.GISACAVCDGAAPIFR.D | 1664.8446 |
|  |  |  |  |  |  |  |  | R.DKPLAVIGGGDSAMEEATFLTK.Y | 2250.2107 |
|  |  |  |  |  |  |  |  | K.VYIIHRR.D | 956.6020 |
|  |  |  |  |  |  |  |  | K.IEVIWNSVVVEANGER.L | 1814.9915 |
|  |  |  |  |  |  |  |  | K.FLDGQLELDSDGYVITKPGTTQTSVR.G | 2840.5264 |
|  |  |  |  |  |  |  |  | R.GVFAAGDVQDKK.Y | 1234.6752 |
| 42 | Phosphoglycerate kinase | *Ricinus communis* | XP\_002513353.1 | 8.74/50.11 | 484 | 21 | 8 | R.ADLNVPLDDNQKITDDTR.I | 2043.0861 |
|  |  |  |  |  |  |  |  | K.VILSSHLGRPK.G | 1206.7644 |
|  |  |  |  |  |  |  |  | K.FSLAPLVPR.L | 999.6199 |
|  |  |  |  |  |  |  |  | K.LVASLPEGGVLLLENVR.F | 1779.1136 |
|  |  |  |  |  |  |  |  | K.KLASLADLYVNDAFGTAHR.A | 2062.1746 |
|  |  |  |  |  |  |  |  | K.LASLADLYVNDAFGTAHR.A | 1934.0638 |
|  |  |  |  |  |  |  |  | K.RPFAAIVGGSK.V | 1102.6606 |
|  |  |  |  |  |  |  |  | K.GVTTIIGGGDSVAAVEK.V | 1573.9030 |
| 46 | ferritin-3 | Ricinus communis | XP\_015575717.1 | 6.19/27.4 | 76 | 22 | 6 | K.GSGANNKPLTGVVFEPFEEVKK.E | 2347.3003 |
|  |  |  |  |  |  |  |  | K.ELNLVPTVPQVSLAR.Q | 1635.9916 |
|  |  |  |  |  |  |  |  | K.FMEYQNK.R | 959.4547 |
|  |  |  |  |  |  |  |  | K.FMEYQNKR.G | 1115.5590 |
|  |  |  |  |  |  |  |  | K.ISEYVAQLR.R | 1078.6136 |
|  |  |  |  |  |  |  |  | K.ISEYVAQLRR.V | 1234.7203 |
| 58 | Triosephosphate isomerase | *Ricinus communis* | XP\_002529248.1 | 4.61/34.89 | 176 | 24 | 7 | K.SSLTDRIEISAQNSWVSK.G | 2053.2068 |
|  |  |  |  |  |  |  |  | K.GGAFTGEISVEQLNDIGCK.W | 1995.1399 |
|  |  |  |  |  |  |  |  | K.WVILGHSER.R | 1096.6700 |
|  |  |  |  |  |  |  |  | K.WVILGHSER.R | 1128.6631 |
|  |  |  |  |  |  |  |  | R.HVIGENDEFIGKK.A | 1485.8888 |
|  |  |  |  |  |  |  |  | K.VATPQQAQEVHVALR.D | 1647.0405 |
|  |  |  |  |  |  |  |  | K.VATPQQAQEVHVALRDWLK.K | 2221.3911 |
| 61 | ATP synthase delta chain, mitochondrial | *Ricinus communis* | XP\_002528798.1 | 5.7/21.85 | 76 | 14 | 1 | K.LSSATTDLEKAEAQIGVDVHSALNSALTG.- | 2898.7009 |
| 70 | Nascent polypeptide associated complex alpha subunit | *Ricinus communis* | XP\_002521293.1 | 4.28/24.8 | 213 | 34 | 6 | K.LGMKPVTGVSR.V | 1160.6915 |
|  |  |  |  |  |  |  |  | R.MPDMASVLPK.S | 1104.5928 |
|  |  |  |  |  |  |  |  | K.SDLSGAAAAAQADEEEEEVDETGVEPR.D | 2775.3193 |
|  |  |  |  |  |  |  |  | R.DIDLVMTQAGVPR.S | 1414.7941 |
|  |  |  |  |  |  |  |  | R.DIDLVMTQAGVPR.S | 1430.7944 |
|  |  |  |  |  |  |  |  | K.ALKTHSGDIVSAIMELTT.- | 1903.0642 |
| 71 | Isocitrate dehydrogenase | *Ricinus communis* | XP\_002528517.1 | 6.29/46.58 | 220 | 28 | 10 | K.CATITPDEAR.V | 1133.5787 |
|  |  |  |  |  |  |  |  | R.NILNGTVFREPIICK.N | 1775.0416 |
|  |  |  |  |  |  |  |  | R.LVPGWTKPICIGR.H | 1528.9036 |
|  |  |  |  |  |  |  |  | R.HAFGDQYR.A | 993.4989 |
|  |  |  |  |  |  |  |  | K.TIEAEAAHGTVTR.H | 1355.7535 |
|  |  |  |  |  |  |  |  | K.GGETSTNSIASIFAWSR.G | 1815.9387 |
|  |  |  |  |  |  |  |  | R.AKLDDNAR.L | 902.5069 |
|  |  |  |  |  |  |  |  | R.LLDFTEKLEAACIGVVESGK.M | 2179.2271 |
|  |  |  |  |  |  |  |  | K.DLALLIHGSK.V | 1066.6743 |
|  |  |  |  |  |  |  |  | K.DLALLIHGSKVTR.D | 1422.9069 |
| 74 | Fructose-bisphosphate aldolase | *Ricinus communis* | XP\_002531508.1 | 6.78/42.95 | 266 | 18 | 8 | R.GILAMDESNATCGKR.L | 1622.8031 |
|  |  |  |  |  |  |  |  | R.GILAMDESNATCGKR.L | 1638.8010 |
|  |  |  |  |  |  |  |  | R.LASIGLENTEANR.Q | 1387.7484 |
|  |  |  |  |  |  |  |  | R.LASIGLENTEANRQAYR.T | 1906.0361 |
|  |  |  |  |  |  |  |  | R.TAAYYEQGAR.F | 1129.5463 |
|  |  |  |  |  |  |  |  | R.ATPEQVADYTLK.L | 1335.7045 |
|  |  |  |  |  |  |  |  | K.WGGRPENLK.A | 1056.5747 |
|  |  |  |  |  |  |  |  | K.AAQEALLIR.A | 984.5939 |
| 87 | Malate dehydrogenase | *Ricinus communis* | XP\_002524262.1 | 8.51/36.31 | 483 | 21 | 6 | K.VAVLGAAGGIGQPLALLMK.L | 1795.2166 |
|  |  |  |  |  |  |  |  | K.ALEGSDVVIIPAGVPR.K | 1593.0391 |
|  |  |  |  |  |  |  |  | R.DDLFNINAGIVK.G | 1318.8048 |
|  |  |  |  |  |  |  |  | K.RLFGVTTLDVVR.A | 1375.9158 |
|  |  |  |  |  |  |  |  | R.LFGVTTLDVVR.A | 1219.7968 |
|  |  |  |  |  |  |  |  | K.ANLPDEEIVALTKR.T | 1568.9990 |
| 96 | Malate dehydrogenase | *Ricinus communis* | XP\_002522546.1 | 8.47/36.14 | 418 | 29 | 7 | K.VAILGAAGGIGQPLALLMK.L | 1809.1283 |
|  |  |  |  |  |  |  |  | R.AQVSGYAGEEQLGQALEGSDIVIIPAGVPR.K | 3024.7229 |
|  |  |  |  |  |  |  |  | R.DDLFNINAGIVK.S | 1318.7338 |
|  |  |  |  |  |  |  |  | K.KLFGVTTLDVVR.A | 1347.8370 |
|  |  |  |  |  |  |  |  | K.LFGVTTLDVVR.A | 1219.7322 |
|  |  |  |  |  |  |  |  | K.NGVEEVLDLGPLSDYEK.Q | 1876.9935 |
|  |  |  |  |  |  |  |  | K.QGLESLIPELK.A | 1226.7230 |
| **Transcription and protein synthesis** | | | | | | | | | |
| 12 | O-methyltransferase | *Ricinus communis* | XP\_002522586.1 | 5.57/40.49 | 289 | 30 | 9 | K.ATDLLQAQTHIYNHIFNNLNSMCLK.C | 2975.5884 |
|  |  |  |  |  |  |  |  | R.MLVYSGFFVTTETPDGQEAYDLTPSTR.L | 3025.5208 |
|  |  |  |  |  |  |  |  | R.HPEYNQIFNESMASDSR.M | 2024.9440 |
|  |  |  |  |  |  |  |  | R.HPEYNQIFNESMASDSR.M | 2040.9343 |
|  |  |  |  |  |  |  |  | R.IISQNFPHMQCTVLDR.A | 1959.0159 |
|  |  |  |  |  |  |  |  | R.IISQNFPHMQCTVLDR.A | 1975.0131 |
|  |  |  |  |  |  |  |  | K.LVLHCWNDEECIR.I | 1743.8419 |
|  |  |  |  |  |  |  |  | K.RLFLEAGFSHYK.I | 1467.8075 |
|  |  |  |  |  |  |  |  | R.LFLEAGFSHYK.I | 1311.7019 |
| 48 | Polyadenylate-binding protein | *Ricinus communis* | XP\_002513523.1 | 5.03/21.91 | 84 | 23 | 5 | K.LKSAITGGAASSLSAPR.K | 1586.9277 |
|  |  |  |  |  |  |  |  | K.SAITGGAASSLSAPR.K | 1345.7372 |
|  |  |  |  |  |  |  |  | R.LASRGDFDSLGTDGGPGPQR.S | 2003.0216 |
|  |  |  |  |  |  |  |  | R.GDFDSLGTDGGPGPQR.S | 1575.7352 |
|  |  |  |  |  |  |  |  | K.NLHLNLDRR.T | 1150.6647 |
| 55 | Elongation factor 1-beta | *Ricinus communis* | XP\_002511200.1 | 4.45/25.19 | 501 | 45 | 8 | M.AGTFYDLGSAAGLK.N | 1412.6932 |
|  |  |  |  |  |  |  |  | K.NLDDYLLTR.S | 1122.5627 |
|  |  |  |  |  |  |  |  | R.SYITGYQASKDDVTVYAAISNAPSSEYVNVSR.W | 3455.6863 |
|  |  |  |  |  |  |  |  | R.WFHHIDALLR.I | 1339.6755 |
|  |  |  |  |  |  |  |  | K.GFAPVAEEAVATPPATDSK.A | 1857.9183 |
|  |  |  |  |  |  |  |  | R.SIQMEGLLWGASK.L | 1451.6987 |
|  |  |  |  |  |  |  |  | R.SIQMEGLLWGASK.L | 1467.7025 |
|  |  |  |  |  |  |  |  | K.LVPVGYGIK.K | 945.5599 |
| 60 | UMP-CMP kinase | *Ricinus communis* | XP\_002526510.1 | 5.24/23.61 | 141 | 25 | 4 | K.AMQESGNDKFLIDGFPR.N | 1925.0701 |
|  |  |  |  |  |  |  |  | R.NEENRAAFESVTK.I | 1494.8248 |
|  |  |  |  |  |  |  |  | R.NQGRVDDNIETIR.K | 1529.8798 |
|  |  |  |  |  |  |  |  | K.SIEEVFEDVK.A | 1194.6635 |
| 63 | eukaryotic translation initiation factor 5A | *Ricinus communis* | XP\_015584449.1 | 5.6/17.7 | 345 | 41 | 7 | M.SDEEHHFESK.A | 1286.6012 |
|  |  |  |  |  |  |  |  | M.SDEEHHFESKADAGASK.T | 1886.9385 |
|  |  |  |  |  |  |  |  | K.TYPQQAGTIR.K | 1134.6526 |
|  |  |  |  |  |  |  |  | K.TYPQQAGTIRK.N | 1262.7572 |
|  |  |  |  |  |  |  |  | R.KNGYIVIK.N | 935.5996 |
|  |  |  |  |  |  |  |  | K.CHFVGIDIFNAK.K | 1420.7874 |
|  |  |  |  |  |  |  |  | K.KLEDIVPSSHNCDVPHVTR.T | 2203.2400 |
| 79 | Translationally-controlled tumor protein | Ricinus communis | XP\_002516930.1 | 4.5/19.01 | 121 | 22 | 4 | K.VVDIVDTFR.L | 1063.5844 |
|  |  |  |  |  |  |  |  | R.LQEQPPFDKK.Q | 1229.6584 |
|  |  |  |  |  |  |  |  | K.QFVTFIKR.Y | 1038.6177 |
|  |  |  |  |  |  |  |  | K.LDQETQEHFKK.N | 1402.7145 |
| 91 | cysteine synthase | Ricinus communis | XP\_002512253.1 | 5.5/34.43 | 528 | 44 | 10 | K.TPLVYLNHVVDGCVAR.I | 1813.0527 |
|  |  |  |  |  |  |  |  | K.LIITMPASMSLER.R | 1493.8490 |
|  |  |  |  |  |  |  |  | R.AFGAELVLTDPAR.G | 1359.8019 |
|  |  |  |  |  |  |  |  | K.TPNSYILQQFENPANPK.I | 1961.0975 |
|  |  |  |  |  |  |  |  | K.IHYETTGPEIWK.G | 1473.8170 |
|  |  |  |  |  |  |  |  | K.GSGGKVDFFVSGIGTGGTVTGAGGYLR.E | 2517.4265 |
|  |  |  |  |  |  |  |  | K.VDFFVSGIGTGGTVTGAGGYLR.E | 2131.2156 |
|  |  |  |  |  |  |  |  | K.LIGVEPVESAVLSGGKPGPHK.I | 2071.2817 |
|  |  |  |  |  |  |  |  | K.LIVVIFPSFGER.Y | 1376.8691 |
|  |  |  |  |  |  |  |  | R.YLSSVLFESVKR.E | 1427.8654 |
| 94 | Protein disulfide isomerase | *Ricinus communis* | XP\_002515309.1 | 5.38/4.02 | 451 | 29 | 7 | K.SVLIGKVDCDEHK.S | 1499.8191 |
|  |  |  |  |  |  |  |  | K.YGVSGYPTVQWFPK.G | 1660.8854 |
|  |  |  |  |  |  |  |  | R.TAESLAEFVNSEGGTNVK.I | 1852.9899 |
|  |  |  |  |  |  |  |  | K.SEDDVVIANLDADKYR.D | 1822.9729 |
|  |  |  |  |  |  |  |  | K.YGVSGFPTLK.F | 1068.6041 |
|  |  |  |  |  |  |  |  | K.AGEDYEGGRDLEDFVTFINEK.S | 2404.2295 |
|  |  |  |  |  |  |  |  | R.LEEEVEKLEGSTAR.Y | 1589.8767 |
| **Metabolic process** | | | | | | | | | |
| 6 | 26S proteasome non-ATPase regulatory subunit | *Ricinus communis* | XP\_002510253.1 | 6.31/34.88 | 64 | 20 | 6 | R.AVAVVVDPIQSVK.G | 1324.8646 |
|  |  |  |  |  |  |  |  | K.GKVVIDAFR.L | 1004.6530 |
|  |  |  |  |  |  |  |  | R.LINPQTMMLGQEPR.Q | 1643.9296 |
|  |  |  |  |  |  |  |  | R.LINPQTMMLGQEPR.Q | 1659.9310 |
|  |  |  |  |  |  |  |  | K.TNEQTVQEMLNLAIK.Y | 1748.0114 |
|  |  |  |  |  |  |  |  | K.AVQEEDELPPEK.L | 1383.7679 |
| 16 | Tubulin alpha chain | *Ricinus communis* | XP\_002512288.1 | 5.64/15.28 | 221 | 26 | 3 | K.EHGAPGDENR.H | 1081.4980 |
|  |  |  |  |  |  |  |  | R.AVVVHADPDDLGKGGHELSK.S | 2044.1377 |
|  |  |  |  |  |  |  |  | R.IACGIIGLQG.- | 1001.5652 |
| 23 | Enolase | *Ricinus communis* | XP\_002510911.1 | 5.71/48.15 | 310 | 25 | 9 | R.GNPTVEVDVILSDGTLAR.A | 1856.0620 |
|  |  |  |  |  |  |  |  | R.AAVPSGASTGIYEALELR.D | 1805.0258 |
|  |  |  |  |  |  |  |  | R.AAVPSGASTGIYEALELRDGGSDYLGK.G | 2697.4602 |
|  |  |  |  |  |  |  |  | K.VNQIGSVTESIEAVK.M | 1573.9124 |
|  |  |  |  |  |  |  |  | R.AGWGVMASHR.S | 1087.5491 |
|  |  |  |  |  |  |  |  | R.AGWGVMASHR.S | 1119.5415 |
|  |  |  |  |  |  |  |  | R.SGETEDTFIADLSVGLATGQIK.T | 2252.2422 |
|  |  |  |  |  |  |  |  | R.IEEELGSGAVYAGAK.F | 1493.8179 |
|  |  |  |  |  |  |  |  | K.FRAPVAPY.- | 920.5282 |
| 31 | ribosome-inactivating protein gelonin | *Ricinus communis* | XP\_002532190.2 | 5.16/34.13 | 89 | 5 | 1 | R.LPYGGSYQALYNAGASR.E | 1787.9030 |
| 78 | cysteine proteinase inhibitor | *Ricinus communis* | XP\_002525552.1 | 6.46/26.62 | 34 | 29 | 4 | K.ENAMVEFGR.V | 1069.5118 |
|  |  |  |  |  |  |  |  | R.EGHGAEWKEVAAHDPVVQDAATHAVNTIQQR.S | 3396.7546 |
|  |  |  |  |  |  |  |  | R.SNSLFPYQLQEIVHAK.A | 1874.0400 |
|  |  |  |  |  |  |  |  | K.AQVVDDFAKFDMILK.V | 1755.9500 |
| 86 | enolase | *Ricinus communis* | XP\_002528580.1 | 5.62/48.14 | 36 | 4 | 2 | R.AGWGVMASHR.S | 1119.6007 |
|  |  |  |  |  |  |  |  | K.FRTPVEPY.- | 1008.6077 |
| 90 | proteasome subunit alpha type-3 | *Ricinus communis* | XP\_015583123.1 | 6.1/28.32 | 169 | 16 | 3 | M.SSIGTGYDLSVTTFSPDGR.V | 2002.0913 |
|  |  |  |  |  |  |  |  | R.VFQIEYAAK.A | 1068.6423 |
|  |  |  |  |  |  |  |  | R.LHQKIPDDLLEEAK.A | 1649.0112 |
| 93 | enolase | *Ricinus communis* | XP\_002528580.1 | 5.62/48.14 | 476 | 25 | 8 | R.GNPTVEADIKLSDGHLAR.A | 1893.0850 |
|  |  |  |  |  |  |  |  | R.AAVPSGASTGIYEALELR.D | 1805.0453 |
|  |  |  |  |  |  |  |  | R.AAVPSGASTGIYEALELRDGGSDYLGK.G | 2697.4924 |
|  |  |  |  |  |  |  |  | K.VNQIGSVTESIEAVR.M | 1601.9299 |
|  |  |  |  |  |  |  |  | R.AGWGVMASHR.S | 1119.5394 |
|  |  |  |  |  |  |  |  | R.SGETEDTFIADLSVGLATGQIK.T | 2252.2744 |
|  |  |  |  |  |  |  |  | R.IEEELGAEAVYAGAK.F | 1549.8539 |
|  |  |  |  |  |  |  |  | K.FRTPVEPY.- | 1008.5538 |
| **Cellular biosynthesis** | | | | | | | | | |
| 11 | S-adenosylmethionine synthase | *Ricinus communis* | XP\_015572366.1 | 5.59/43.7 | 538 | 26 | 10 | R.NIGFVSDDVGLDADKCK.V | 1852.9309 |
|  |  |  |  |  |  |  |  | K.VLVNIEQQSPDIAQGVHGHFTK.R | 2417.3469 |
|  |  |  |  |  |  |  |  | R.KNGTCPWLRPDGK.T | 1529.7961 |
|  |  |  |  |  |  |  |  | K.NGTCPWLRPDGK.T | 1401.6995 |
|  |  |  |  |  |  |  |  | K.TQVTVEYYNDNGAMVPVR.V | 2057.0439 |
|  |  |  |  |  |  |  |  | K.TQVTVEYYNDNGAMVPVR.V | 2072.0474 |
|  |  |  |  |  |  |  |  | K.TIFHLNPSGR.F | 1141.6376 |
|  |  |  |  |  |  |  |  | R.FVIGGPHGDAGLTGR.K | 1453.7963 |
|  |  |  |  |  |  |  |  | R.FVIGGPHGDAGLTGRK.I | 1581.8951 |
|  |  |  |  |  |  |  |  | K.TAAYGHFGR.D | 979.4919 |
| 25 | inosine triphosphate pyrophosphatase | *Ricinus communis* | XP\_015574043.1 | 5.53/35.7 | 182 | 21 | 6 | K.VVVSRPVTFVTGNAK.K | 1573.9650 |
|  |  |  |  |  |  |  |  | K.IDLPELQGEPEDISKEK.A | 1940.0682 |
|  |  |  |  |  |  |  |  | K.VKGPVLVEDTCLCYNALK.G | 2079.1533 |
|  |  |  |  |  |  |  |  | K.TMGTIVPPRGPR.D | 1281.7570 |
|  |  |  |  |  |  |  |  | K.TMGTIVPPRGPR.D | 1297.7472 |
|  |  |  |  |  |  |  |  | R.YRALSLVK.S | 949.6145 |
| 29 | Inositol-1-monophosphatase | *Ricinus communis* | XP\_002531606.1 | 5.21/29.5 | 517 | 32 | 7 | M.AQTDSLSEYLDTAVDAAK.K | 1939.9639 |
|  |  |  |  |  |  |  |  | M.AQTDSLSEYLDTAVDAAKK.A | 2068.0637 |
|  |  |  |  |  |  |  |  | K.GQVDLVTETDKTCEDLIFNHLR.Q | 2603.3623 |
|  |  |  |  |  |  |  |  | K.GAFFNGKPIK.V | 1079.6055 |
|  |  |  |  |  |  |  |  | K.SELVNSLLATEAGTKR.D | 1688.9539 |
|  |  |  |  |  |  |  |  | K.EAGGLIFDPSGKEFDITSQR.V | 2167.1274 |
|  |  |  |  |  |  |  |  | K.EFDITSQR.V | 995.4885 |
| 80 | 1,2-dihydroxy-3-keto-5-methylthiopentene dioxyge | *Ricinus communis* | XP\_002517071.1 | 5.2/23.94 | 218 | 26 | 4 | R.LNADNYETDEELKK.I | 1681.8210 |
|  |  |  |  |  |  |  |  | K.GGMIVLPAGIYHR.F | 1399.7703 |
|  |  |  |  |  |  |  |  | R.FTLDTDNYIK.A | 1229.6134 |
|  |  |  |  |  |  |  |  | K.AFVQKEVDHQAVDATA.- | 1728.8872 |
| 95 | Superoxide dismutase [Cu-Zn] | *Ricinus communis* | XP\_002512288.1 | 5.64/15.68 | 221 | 26 | 3 | K.EHGAPGDENR.H | 1081.4980 |
|  |  |  |  |  |  |  |  | R.AVVVHADPDDLGKGGHELSK.S | 2044.1377 |
|  |  |  |  |  |  |  |  | R.IACGIIGLQG.- | 1001.5652 |
| **Unknown** | | | | | | | | | |
| 15 | Uncharacterized protein | *Ricinus communis* | XP\_002530987.1 | 8.88/35.02 | 514 | 35 | 7 | K.GGRPEFYFEDGAYPEQVDWTGQK.N | 2676.4404 |
|  |  |  |  |  |  |  |  | R.KAEQYLADSGIPYTIIR.A | 1938.2065 |
|  |  |  |  |  |  |  |  | R.AGGLQDKEGGVR.E | 1186.7072 |
|  |  |  |  |  |  |  |  | R.ELLIGKDDELLQTETR.T | 1873.1554 |
|  |  |  |  |  |  |  |  | R.ADVAEVCIQALQFEEAK.F | 1921.1125 |
|  |  |  |  |  |  |  |  | K.AFDLASKPEGTGSPTKDFK.A | 1996.1787 |
|  |  |  |  |  |  |  |  | K.ALFSQVTTRF.- | 1169.7202 |
| 26 | Uncharacterized protein | *Ricinus communis* | XP\_002533008.1 | 8.19/36.16 | 46 | 7 | 2 | R.LARNPNDIDTLR.S | 1397.8063 |
|  |  |  |  |  |  |  |  | K.SQIFSYSGDFESAR.K | 1593.7789 |
| 30 | uncharacterized protein | *Ricinus communis* | XP\_015571753.1 | 6.23/34.75 | 176 | 26 | 9 | K.VIIPNKHGEK.I | 1134.6849 |
|  |  |  |  |  |  |  |  | K.EIVVLCHGFR.S | 1229.6670 |
|  |  |  |  |  |  |  |  | R.AVTEHFSGANR.V | 1188.6040 |
|  |  |  |  |  |  |  |  | K.YHDIGAVVNISGR.Y | 1400.7622 |
|  |  |  |  |  |  |  |  | R.YDLNKGIEER.F | 1236.6499 |
|  |  |  |  |  |  |  |  | R.FGKDFMEK.I | 1001.4915 |
|  |  |  |  |  |  |  |  | R.FGKDFMEK.I | 1017.4824 |
|  |  |  |  |  |  |  |  | K.IKQDGFFDVK.N | 1196.6525 |
|  |  |  |  |  |  |  |  | K.ACLQIDKECR.V | 1292.6370 |
| 33 | Uncharacterized protein | *Ricinus communis* | XP\_002512222.1 | 4.96/19.67 | 126 | 35 | 5 | M.SAESATAIQR.S | 1075.5576 |
|  |  |  |  |  |  |  |  | K.LHSIVIKGPEEEGPK.T | 1632.9375 |
|  |  |  |  |  |  |  |  | R.SLTIFIEDNHTGSDITK.V | 1891.0022 |
|  |  |  |  |  |  |  |  | R.SLTIFIEDNHTGSDITKVQK.F | 2246.2422 |
|  |  |  |  |  |  |  |  | K.FALFGTTVETTDMKGLK.K | 1874.9977 |
| 49 | Uncharacterized protein | *Ricinus communis* | XP\_002521740.1 | 6.58/16.45 | 66 | 7 | 2 | K.FIYDEEK.A | 943.4492 |
|  |  |  |  |  |  |  |  | K.FIYDEEKALEK.T | 1384.7157 |
| 67 | Uncharacterized protein | *Ricinus communis* | XP\_002533607.1 | 5.26/11.95 | 104 | 28 | 3 | M.AGFKHLVIVK.F | 1153.7581 |
|  |  |  |  |  |  |  |  | K.FKEDAAVEEIVK.G | 1377.7893 |
|  |  |  |  |  |  |  |  | K.LVSESDLVK.S | 989.5856 |

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| a, corresponds to code of protein spots; b, c and d, Homologous protein, Species, and Accession of the matched protein from the NCBI database; e, Theor pI/Mr, pI and molecular weight (kDa) annotated in the NCBI database; f, the score obtained from the NCBI database for each match; g, percentage of the conserved region of the identified peptide sequences in the matched protein; h, number of matched peptides; j, sequences of the matched peptides; k, the mass/charge ratio. |