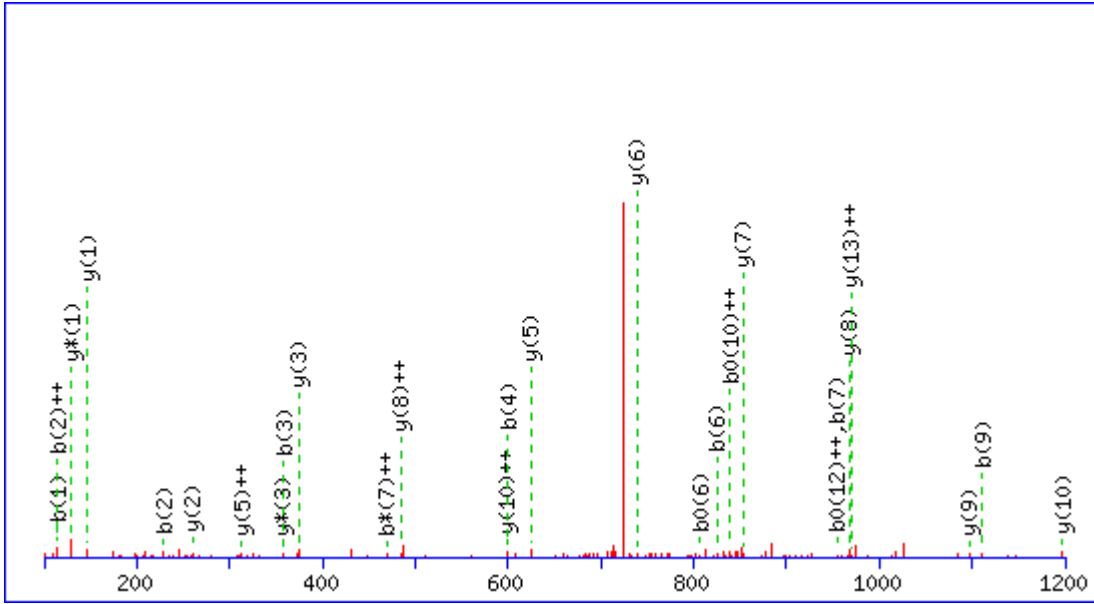


IDENTIFICATION 1

MS/MS Fragmentation of **ADEKPKEGVKTENNNDHNLK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide Mr(calc): 2891.4009

Variable modifications:

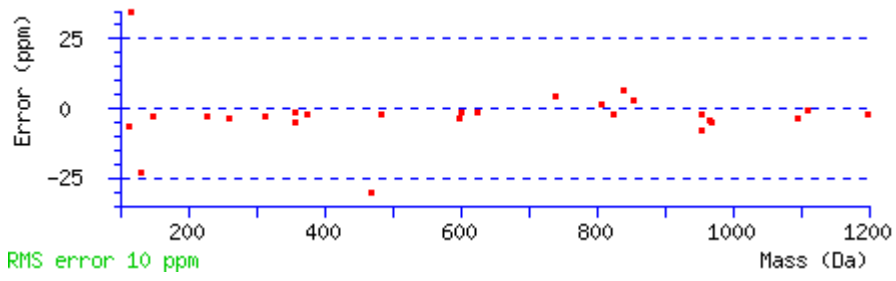
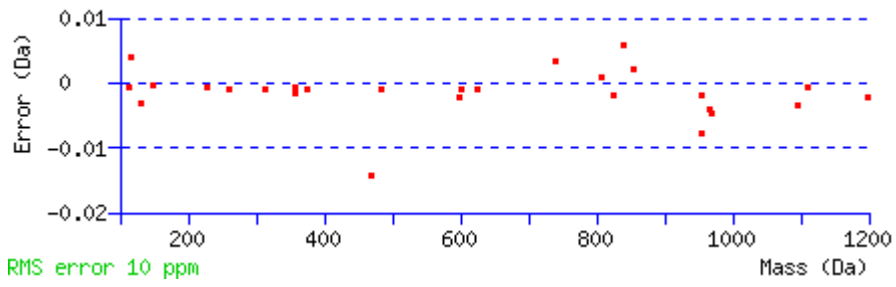
N-term : Acetyl (N-term)

K4 : GlyGly (K)

K10 : Sumo 3 (K)

Ions Score: 19 Expect: 43

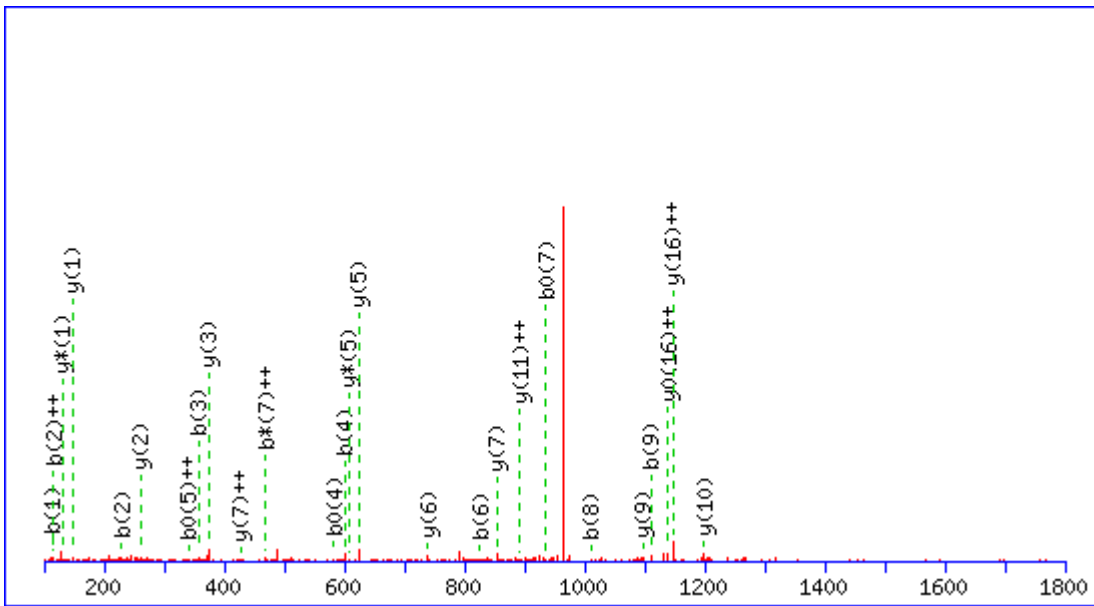
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2779.3605 | 1390.1839 | 2762.3340 | 1381.6706 | 2761.3500 | 1381.1786 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2664.3336 | 1332.6704 | 2647.3070 | 1324.1572 | 2646.3230 | 1323.6652 | 18 |
| 4 | 600.2624 | 300.6348 | 583.2358 | 292.1216 | 582.2518 | 291.6295 | K | 2535.2910 | 1268.1491 | 2518.2645 | 1259.6359 | 2517.2804 | 1259.1439 | 17 |
| 5 | 697.3151 | 349.1612 | 680.2886 | 340.6479 | 679.3046 | 340.1559 | P | 2293.1531 | 1147.0802 | 2276.1266 | 1138.5669 | 2275.1425 | 1138.0749 | 16 |
| 6 | 825.4101 | 413.2087 | 808.3836 | 404.6954 | 807.3995 | 404.2034 | K | 2196.1003 | 1098.5538 | 2179.0738 | 1090.0405 | 2178.0898 | 1089.5485 | 15 |
| 7 | 954.4527 | 477.7300 | 937.4262 | 469.2167 | 936.4421 | 468.7247 | E | 2068.0054 | 1034.5063 | 2050.9788 | 1025.9931 | 2049.9948 | 1025.5010 | 14 |
| 8 | 1011.4742 | 506.2407 | 994.4476 | 497.7274 | 993.4636 | 497.2354 | G | 1938.9628 | 969.9850 | 1921.9362 | 961.4718 | 1920.9522 | 960.9798 | 13 |
| 9 | 1110.5426 | 555.7749 | 1093.5160 | 547.2617 | 1092.5320 | 546.7696 | V | 1881.9413 | 941.4743 | 1864.9148 | 932.9610 | 1863.9308 | 932.4690 | 12 |
| 10 | 1695.8297 | 848.4185 | 1678.8031 | 839.9052 | 1677.8191 | 839.4132 | K | 1782.8729 | 891.9401 | 1765.8464 | 883.4268 | 1764.8623 | 882.9348 | 11 |
| 11 | 1796.8773 | 898.9423 | 1779.8508 | 890.4290 | 1778.8668 | 889.9370 | T | 1197.5858 | 599.2966 | 1180.5593 | 590.7833 | 1179.5753 | 590.2913 | 10 |
| 12 | 1925.9199 | 963.4636 | 1908.8934 | 954.9503 | 1907.9094 | 954.4583 | E | 1096.5382 | 548.7727 | 1079.5116 | 540.2594 | 1078.5276 | 539.7674 | 9 |
| 13 | 2039.9629 | 1020.4851 | 2022.9363 | 1011.9718 | 2021.9523 | 1011.4798 | N | 967.4956 | 484.2514 | 950.4690 | 475.7381 | 949.4850 | 475.2461 | 8 |
| 14 | 2154.0058 | 1077.5065 | 2136.9792 | 1068.9933 | 2135.9952 | 1068.5012 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 15 | 2269.0327 | 1135.0200 | 2252.0062 | 1126.5067 | 2251.0222 | 1126.0147 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2406.0916 | 1203.5495 | 2389.0651 | 1195.0362 | 2388.0811 | 1194.5442 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2519.1757 | 1260.0915 | 2502.1491 | 1251.5782 | 2501.1651 | 1251.0862 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2633.2186 | 1317.1130 | 2616.1921 | 1308.5997 | 2615.2081 | 1308.1077 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2746.3027 | 1373.6550 | 2729.2761 | 1365.1417 | 2728.2921 | 1364.6497 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 2

MS/MS Fragmentation of **ADEKPKEGVKTENNDHINLK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide Mr(calc): 2892.3849

Variable modifications:

N-term : Acetyl (N-term)

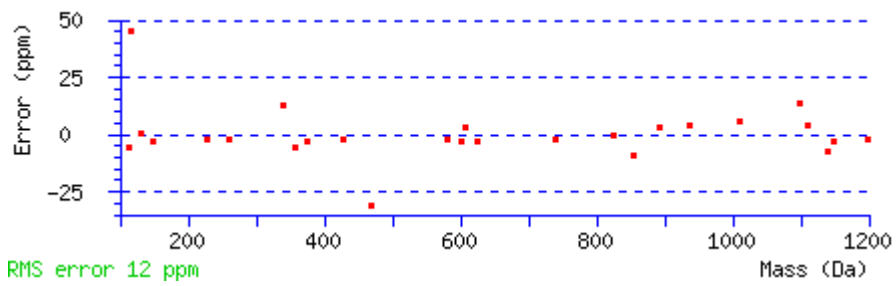
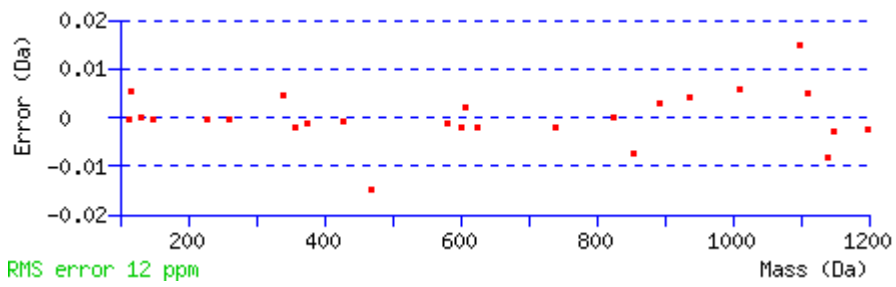
K4 : GlyGly (K)

K10 : Sumo 3 (K)

N13 : Deamidated (NQ)

Ions Score: 7 Expect: 6.9e+02

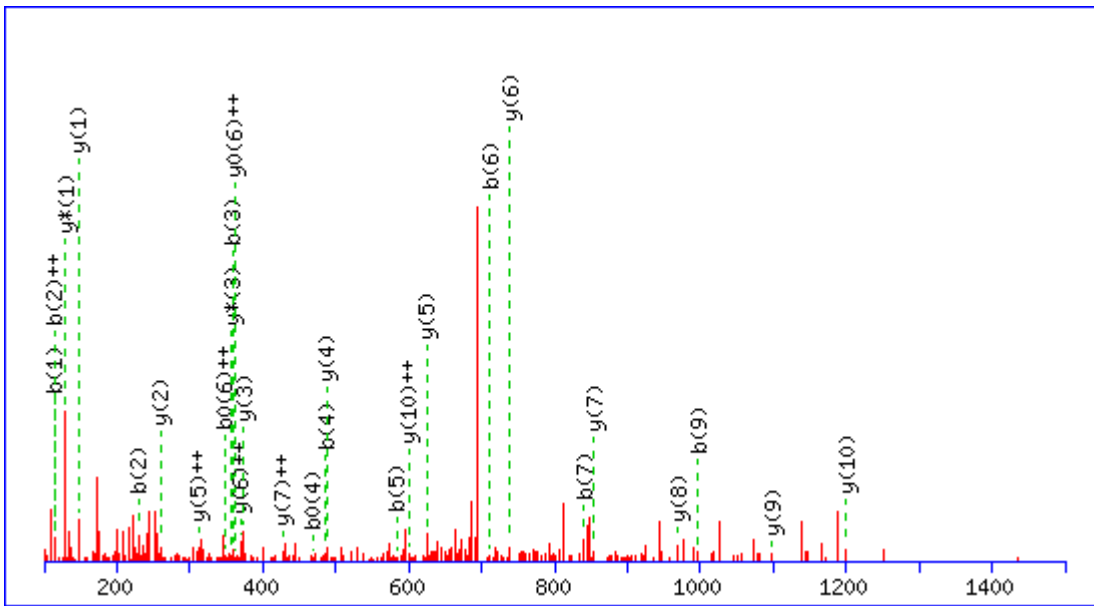
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2780.3446 | 1390.6759 | 2763.3180 | 1382.1626 | 2762.3340 | 1381.6706 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2665.3176 | 1333.1624 | 2648.2911 | 1324.6492 | 2647.3070 | 1324.1572 | 18 |
| 4 | 600.2624 | 300.6348 | 583.2358 | 292.1216 | 582.2518 | 291.6295 | K | 2536.2750 | 1268.6411 | 2519.2485 | 1260.1279 | 2518.2645 | 1259.6359 | 17 |
| 5 | 697.3151 | 349.1612 | 680.2886 | 340.6479 | 679.3046 | 340.1559 | P | 2294.1371 | 1147.5722 | 2277.1106 | 1139.0589 | 2276.1266 | 1138.5669 | 16 |
| 6 | 825.4101 | 413.2087 | 808.3836 | 404.6954 | 807.3995 | 404.2034 | K | 2197.0844 | 1099.0458 | 2180.0578 | 1090.5325 | 2179.0738 | 1090.0405 | 15 |
| 7 | 954.4527 | 477.7300 | 937.4262 | 469.2167 | 936.4421 | 468.7247 | E | 2068.9894 | 1034.9983 | 2051.9629 | 1026.4851 | 2050.9788 | 1025.9931 | 14 |
| 8 | 1011.4742 | 506.2407 | 994.4476 | 497.7274 | 993.4636 | 497.2354 | G | 1939.9468 | 970.4770 | 1922.9203 | 961.9638 | 1921.9362 | 961.4718 | 13 |
| 9 | 1110.5426 | 555.7749 | 1093.5160 | 547.2617 | 1092.5320 | 546.7696 | V | 1882.9253 | 941.9663 | 1865.8988 | 933.4530 | 1864.9148 | 932.9610 | 12 |
| 10 | 1695.8297 | 848.4185 | 1678.8031 | 839.9052 | 1677.8191 | 839.4132 | K | 1783.8569 | 892.4321 | 1766.8304 | 883.9188 | 1765.8464 | 883.4268 | 11 |
| 11 | 1796.8773 | 898.9423 | 1779.8508 | 890.4290 | 1778.8668 | 889.9370 | T | 1198.5699 | 599.7886 | 1181.5433 | 591.2753 | 1180.5593 | 590.7833 | 10 |
| 12 | 1925.9199 | 963.4636 | 1908.8934 | 954.9503 | 1907.9094 | 954.4583 | E | 1097.5222 | 549.2647 | 1080.4956 | 540.7515 | 1079.5116 | 540.2594 | 9 |
| 13 | 2040.9469 | 1020.9771 | 2023.9203 | 1012.4638 | 2022.9363 | 1011.9718 | N | 968.4796 | 484.7434 | 951.4530 | 476.2302 | 950.4690 | 475.7381 | 8 |
| 14 | 2154.9898 | 1077.9985 | 2137.9632 | 1069.4853 | 2136.9792 | 1068.9933 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 15 | 2270.0167 | 1135.5120 | 2252.9902 | 1126.9987 | 2252.0062 | 1126.5067 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2407.0757 | 1204.0415 | 2390.0491 | 1195.5282 | 2389.0651 | 1195.0362 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2520.1597 | 1260.5835 | 2503.1332 | 1252.0702 | 2502.1491 | 1251.5782 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2634.2026 | 1317.6050 | 2617.1761 | 1309.0917 | 2616.1921 | 1308.5997 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2747.2867 | 1374.1470 | 2730.2602 | 1365.6337 | 2729.2761 | 1365.1417 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 3

MS/MS Fragmentation of **ADEKPKEGVKTENNDHINLK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2779.3260

Variable modifications:

N-term : Acetyl (N-term)

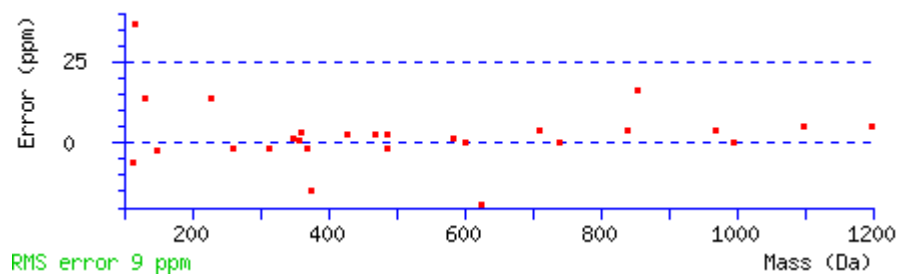
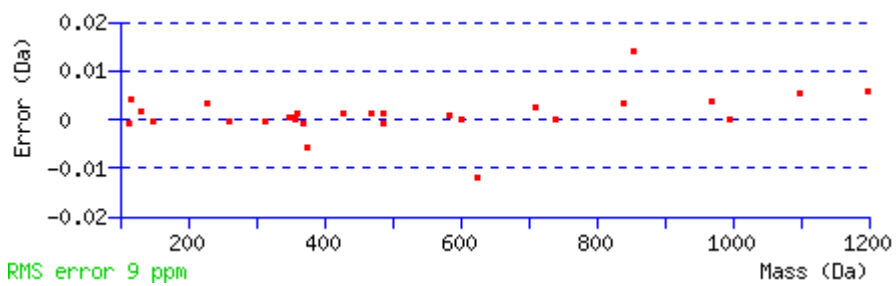
K10 : Sumo 3 (K)

N13 : Deamidated (NQ)

N14 : Deamidated (NQ)

Ions Score: 3 Expect: 2.2e+03

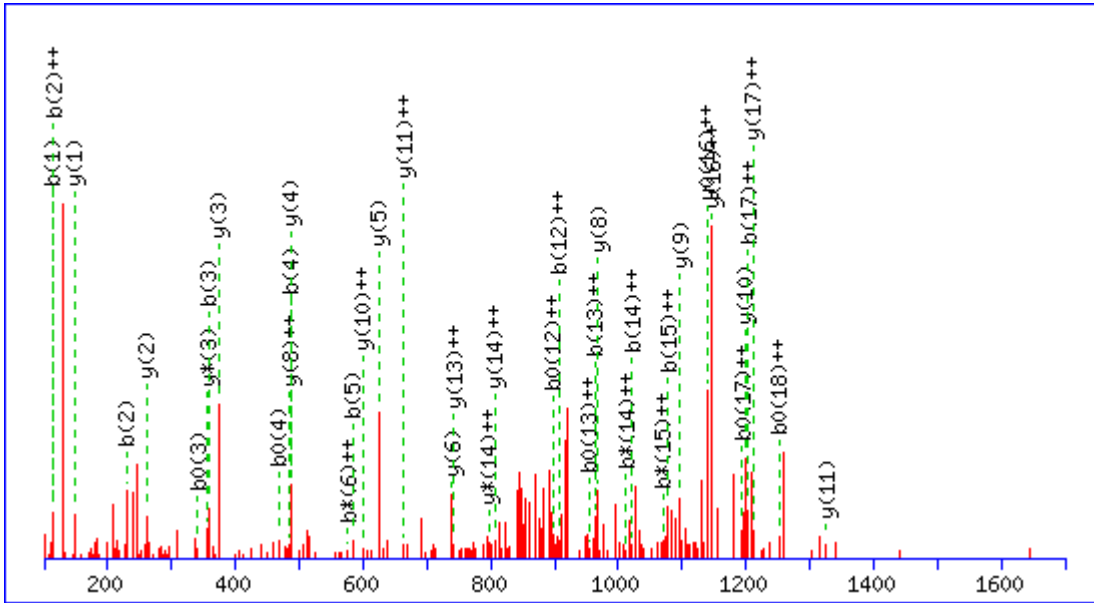
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2667.2856 | 1334.1465 | 2650.2591 | 1325.6332 | 2649.2751 | 1325.1412 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2552.2587 | 1276.6330 | 2535.2322 | 1268.1197 | 2534.2481 | 1267.6277 | 18 |
| 4 | 486.2195 | 243.6134 | 469.1929 | 235.1001 | 468.2089 | 234.6081 | K | 2423.2161 | 1212.1117 | 2406.1896 | 1203.5984 | 2405.2055 | 1203.1064 | 17 |
| 5 | 583.2722 | 292.1397 | 566.2457 | 283.6265 | 565.2617 | 283.1345 | P | 2295.1211 | 1148.0642 | 2278.0946 | 1139.5509 | 2277.1106 | 1139.0589 | 16 |
| 6 | 711.3672 | 356.1872 | 694.3406 | 347.6740 | 693.3566 | 347.1819 | K | 2198.0684 | 1099.5378 | 2181.0418 | 1091.0246 | 2180.0578 | 1090.5325 | 15 |
| 7 | 840.4098 | 420.7085 | 823.3832 | 412.1953 | 822.3992 | 411.7032 | E | 2069.9734 | 1035.4903 | 2052.9469 | 1026.9771 | 2051.9629 | 1026.4851 | 14 |
| 8 | 897.4312 | 449.2193 | 880.4047 | 440.7060 | 879.4207 | 440.2140 | G | 1940.9308 | 970.9691 | 1923.9043 | 962.4558 | 1922.9203 | 961.9638 | 13 |
| 9 | 996.4997 | 498.7535 | 979.4731 | 490.2402 | 978.4891 | 489.7482 | V | 1883.9094 | 942.4583 | 1866.8828 | 933.9450 | 1865.8988 | 933.4530 | 12 |
| 10 | 1581.7867 | 791.3970 | 1564.7602 | 782.8837 | 1563.7762 | 782.3917 | K | 1784.8409 | 892.9241 | 1767.8144 | 884.4108 | 1766.8304 | 883.9188 | 11 |
| 11 | 1682.8344 | 841.9208 | 1665.8079 | 833.4076 | 1664.8238 | 832.9156 | T | 1199.5539 | 600.2806 | 1182.5273 | 591.7673 | 1181.5433 | 591.2753 | 10 |
| 12 | 1811.8770 | 906.4421 | 1794.8504 | 897.9289 | 1793.8664 | 897.4369 | E | 1098.5062 | 549.7567 | 1081.4796 | 541.2435 | 1080.4956 | 540.7515 | 9 |
| 13 | 1926.9039 | 963.9556 | 1909.8774 | 955.4423 | 1908.8934 | 954.9503 | N | 969.4636 | 485.2354 | 952.4371 | 476.7222 | 951.4530 | 476.2302 | 8 |
| 14 | 2041.9309 | 1021.4691 | 2024.9043 | 1012.9558 | 2023.9203 | 1012.4638 | N | 854.4367 | 427.7220 | 837.4101 | 419.2087 | 836.4261 | 418.7167 | 7 |
| 15 | 2156.9578 | 1078.9826 | 2139.9313 | 1070.4693 | 2138.9473 | 1069.9773 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2294.0167 | 1147.5120 | 2276.9902 | 1138.9987 | 2276.0062 | 1138.5067 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2407.1008 | 1204.0540 | 2390.0743 | 1195.5408 | 2389.0902 | 1195.0488 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2521.1437 | 1261.0755 | 2504.1172 | 1252.5622 | 2503.1332 | 1252.0702 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2634.2278 | 1317.6175 | 2617.2012 | 1309.1043 | 2616.2172 | 1308.6123 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 4

MS/MS Fragmentation of **ADEKPKEGVKTENNDHNLK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2778.3420

Variable modifications:

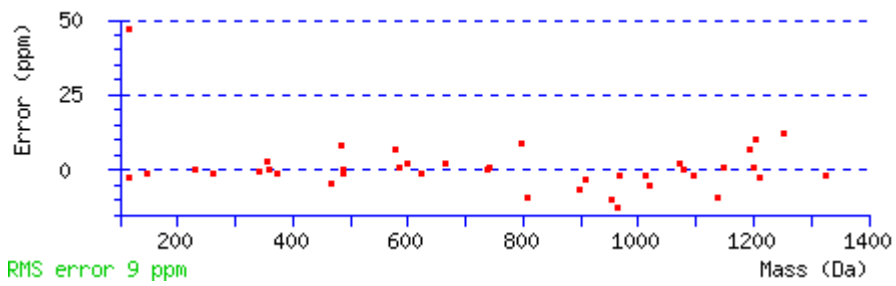
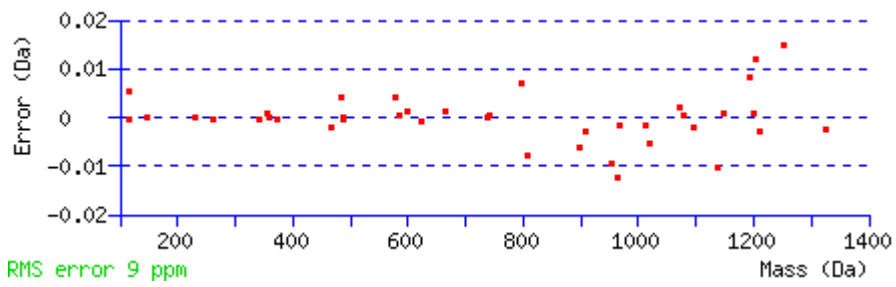
N-term : Acetyl (N-term)

K6 : Sumo 3 (K)

N14 : Deamidated (NQ)

Ions Score: 32 Expect: 2.5

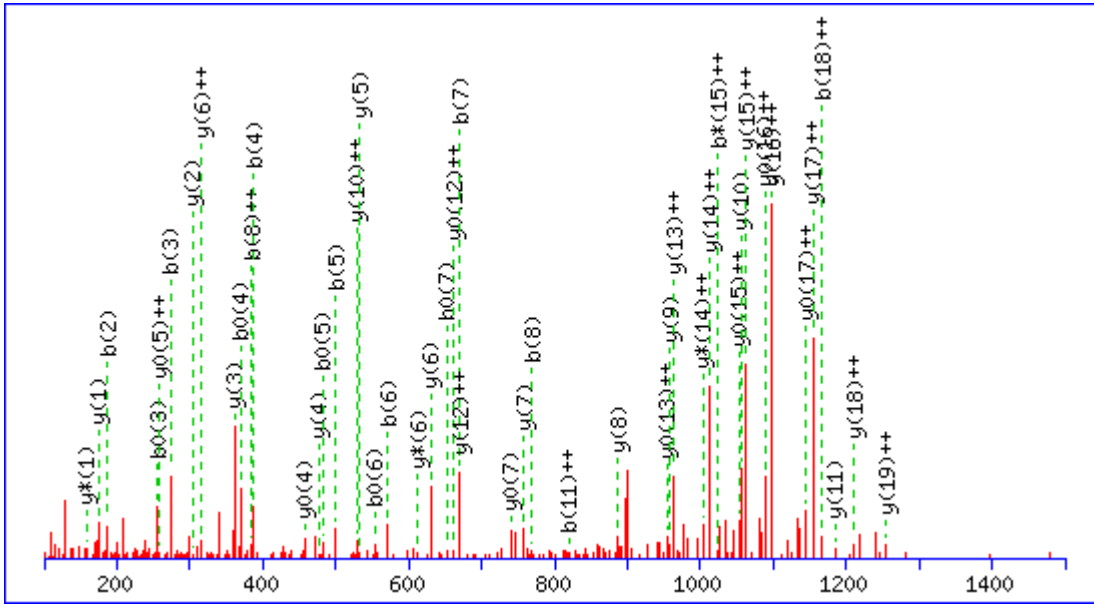
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2666.3016 | 1333.6545 | 2649.2751 | 1325.1412 | 2648.2911 | 1324.6492 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2551.2747 | 1276.1410 | 2534.2481 | 1267.6277 | 2533.2641 | 1267.1357 | 18 |
| 4 | 486.2195 | 243.6134 | 469.1929 | 235.1001 | 468.2089 | 234.6081 | K | 2422.2321 | 1211.6197 | 2405.2055 | 1203.1064 | 2404.2215 | 1202.6144 | 17 |
| 5 | 583.2722 | 292.1397 | 566.2457 | 283.6265 | 565.2617 | 283.1345 | P | 2294.1371 | 1147.5722 | 2277.1106 | 1139.0589 | 2276.1266 | 1138.5669 | 16 |
| 6 | 1168.5593 | 584.7833 | 1151.5327 | 576.2700 | 1150.5487 | 575.7780 | K | 2197.0844 | 1099.0458 | 2180.0578 | 1090.5325 | 2179.0738 | 1090.0405 | 15 |
| 7 | 1297.6019 | 649.3046 | 1280.5753 | 640.7913 | 1279.5913 | 640.2993 | E | 1611.7973 | 806.4023 | 1594.7707 | 797.8890 | 1593.7867 | 797.3970 | 14 |
| 8 | 1354.6233 | 677.8153 | 1337.5968 | 669.3020 | 1336.6128 | 668.8100 | G | 1482.7547 | 741.8810 | 1465.7281 | 733.3677 | 1464.7441 | 732.8757 | 13 |
| 9 | 1453.6918 | 727.3495 | 1436.6652 | 718.8362 | 1435.6812 | 718.3442 | V | 1425.7332 | 713.3703 | 1408.7067 | 704.8570 | 1407.7227 | 704.3650 | 12 |
| 10 | 1581.7867 | 791.3970 | 1564.7602 | 782.8837 | 1563.7762 | 782.3917 | K | 1326.6648 | 663.8360 | 1309.6383 | 655.3228 | 1308.6543 | 654.8308 | 11 |
| 11 | 1682.8344 | 841.9208 | 1665.8079 | 833.4076 | 1664.8238 | 832.9156 | T | 1198.5699 | 599.7886 | 1181.5433 | 591.2753 | 1180.5593 | 590.7833 | 10 |
| 12 | 1811.8770 | 906.4421 | 1794.8504 | 897.9289 | 1793.8664 | 897.4369 | E | 1097.5222 | 549.2647 | 1080.4956 | 540.7515 | 1079.5116 | 540.2594 | 9 |
| 13 | 1925.9199 | 963.4636 | 1908.8934 | 954.9503 | 1907.9094 | 954.4583 | N | 968.4796 | 484.7434 | 951.4530 | 476.2302 | 950.4690 | 475.7381 | 8 |
| 14 | 2040.9469 | 1020.9771 | 2023.9203 | 1012.4638 | 2022.9363 | 1011.9718 | N | 854.4367 | 427.7220 | 837.4101 | 419.2087 | 836.4261 | 418.7167 | 7 |
| 15 | 2155.9738 | 1078.4905 | 2138.9473 | 1069.9773 | 2137.9632 | 1069.4853 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2293.0327 | 1147.0200 | 2276.0062 | 1138.5067 | 2275.0222 | 1138.0147 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2406.1168 | 1203.5620 | 2389.0902 | 1195.0488 | 2388.1062 | 1194.5567 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2520.1597 | 1260.5835 | 2503.1332 | 1252.0702 | 2502.1491 | 1251.5782 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2633.2438 | 1317.1255 | 2616.2172 | 1308.6123 | 2615.2332 | 1308.1202 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 5

MS/MS Fragmentation of **ADSL LAVVKREPAEQPGDGER**

Found in **Q15424**, Scaffold attachment factor B1 OS=Homo sapiens GN=SAFB PE=1 SV=4



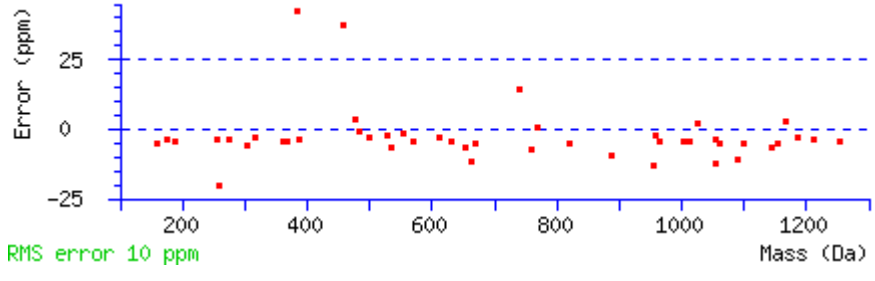
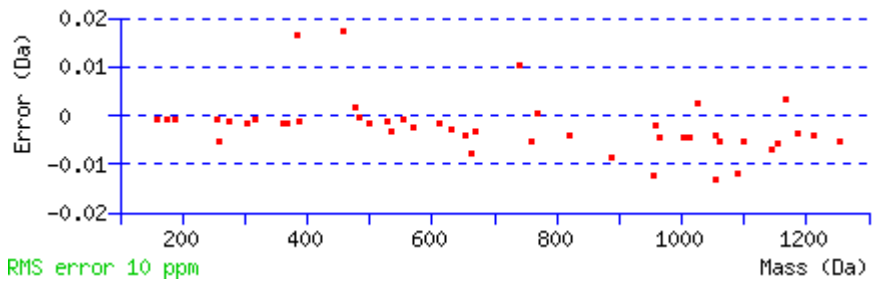
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2693.3369

Variable modifications:

K9 : Sumo 3 (K)

Ions Score: 52 Expect: 0.014

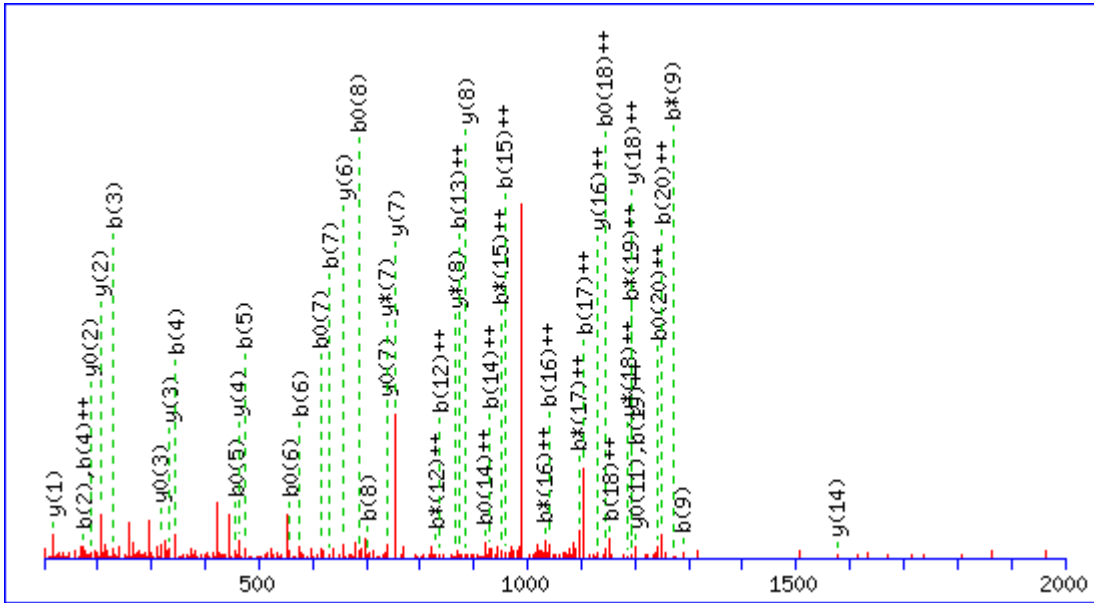
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 72.0444 | 36.5258 | | | | | A | | | | | | | 21 |
| 2 | 187.0713 | 94.0393 | | | 169.0608 | 85.0340 | D | 2623.3070 | 1312.1572 | 2606.2805 | 1303.6439 | 2605.2965 | 1303.1519 | 20 |
| 3 | 274.1034 | 137.5553 | | | 256.0928 | 128.5500 | S | 2508.2801 | 1254.6437 | 2491.2536 | 1246.1304 | 2490.2695 | 1245.6384 | 19 |
| 4 | 387.1874 | 194.0974 | | | 369.1769 | 185.0921 | L | 2421.2481 | 1211.1277 | 2404.2215 | 1202.6144 | 2403.2375 | 1202.1224 | 18 |
| 5 | 500.2715 | 250.6394 | | | 482.2609 | 241.6341 | L | 2308.1640 | 1154.5856 | 2291.1375 | 1146.0724 | 2290.1534 | 1145.5804 | 17 |
| 6 | 571.3086 | 286.1579 | | | 553.2980 | 277.1527 | A | 2195.0799 | 1098.0436 | 2178.0534 | 1089.5303 | 2177.0694 | 1089.0383 | 16 |
| 7 | 670.3770 | 335.6921 | | | 652.3665 | 326.6869 | V | 2124.0428 | 1062.5251 | 2107.0163 | 1054.0118 | 2106.0323 | 1053.5198 | 15 |
| 8 | 769.4454 | 385.2264 | | | 751.4349 | 376.2211 | V | 2024.9744 | 1012.9908 | 2007.9479 | 1004.4776 | 2006.9639 | 1003.9856 | 14 |
| 9 | 1354.7325 | 677.8699 | 1337.7060 | 669.3566 | 1336.7219 | 668.8646 | K | 1925.9060 | 963.4566 | 1908.8795 | 954.9434 | 1907.8954 | 954.4514 | 13 |
| 10 | 1510.8336 | 755.9204 | 1493.8071 | 747.4072 | 1492.8231 | 746.9152 | R | 1340.6189 | 670.8131 | 1323.5924 | 662.2998 | 1322.6084 | 661.8078 | 12 |
| 11 | 1639.8762 | 820.4417 | 1622.8497 | 811.9285 | 1621.8656 | 811.4365 | E | 1184.5178 | 592.7625 | 1167.4913 | 584.2493 | 1166.5073 | 583.7573 | 11 |
| 12 | 1736.9290 | 868.9681 | 1719.9024 | 860.4548 | 1718.9184 | 859.9628 | P | 1055.4752 | 528.2413 | 1038.4487 | 519.7280 | 1037.4647 | 519.2360 | 10 |
| 13 | 1807.9661 | 904.4867 | 1790.9395 | 895.9734 | 1789.9555 | 895.4814 | A | 958.4225 | 479.7149 | 941.3959 | 471.2016 | 940.4119 | 470.7096 | 9 |
| 14 | 1937.0087 | 969.0080 | 1919.9821 | 960.4947 | 1918.9981 | 960.0027 | E | 887.3854 | 444.1963 | 870.3588 | 435.6830 | 869.3748 | 435.1910 | 8 |
| 15 | 2065.0673 | 1033.0373 | 2048.0407 | 1024.5240 | 2047.0567 | 1024.0320 | Q | 758.3428 | 379.6750 | 741.3162 | 371.1617 | 740.3322 | 370.6697 | 7 |
| 16 | 2162.1200 | 1081.5636 | 2145.0935 | 1073.0504 | 2144.1095 | 1072.5584 | P | 630.2842 | 315.6457 | 613.2576 | 307.1325 | 612.2736 | 306.6404 | 6 |
| 17 | 2219.1415 | 1110.0744 | 2202.1149 | 1101.5611 | 2201.1309 | 1101.0691 | G | 533.2314 | 267.1193 | 516.2049 | 258.6061 | 515.2209 | 258.1141 | 5 |
| 18 | 2334.1684 | 1167.5879 | 2317.1419 | 1159.0746 | 2316.1579 | 1158.5826 | D | 476.2100 | 238.6086 | 459.1834 | 230.0953 | 458.1994 | 229.6033 | 4 |
| 19 | 2391.1899 | 1196.0986 | 2374.1633 | 1187.5853 | 2373.1793 | 1187.0933 | G | 361.1830 | 181.0951 | 344.1565 | 172.5819 | 343.1724 | 172.0899 | 3 |
| 20 | 2520.2325 | 1260.6199 | 2503.2059 | 1252.1066 | 2502.2219 | 1251.6146 | E | 304.1615 | 152.5844 | 287.1350 | 144.0711 | 286.1510 | 143.5791 | 2 |
| 21 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 6

MS/MS Fragmentation of **ATGDETGAKVERADGYEPPVQESV**

Found in **P61247**, 40S ribosomal protein S3a OS=Homo sapiens GN=RPS3A PE=1 SV=2



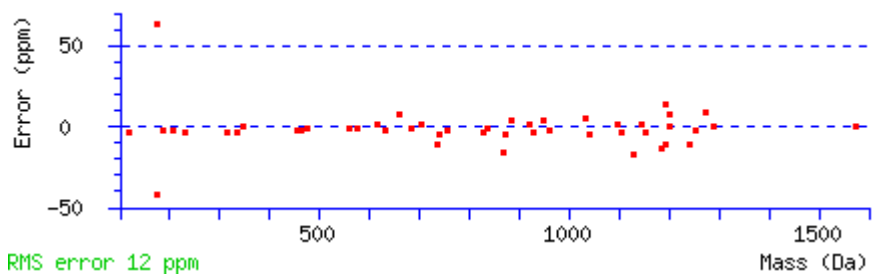
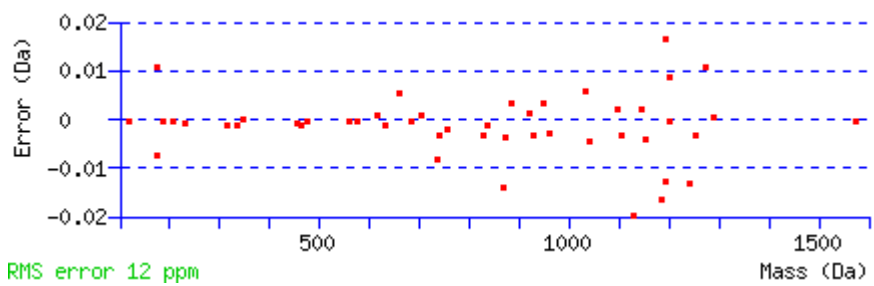
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2961.3588

Variable modifications:

K9 : Sumo 3 (K)

Ions Score: 20 Expect: 64

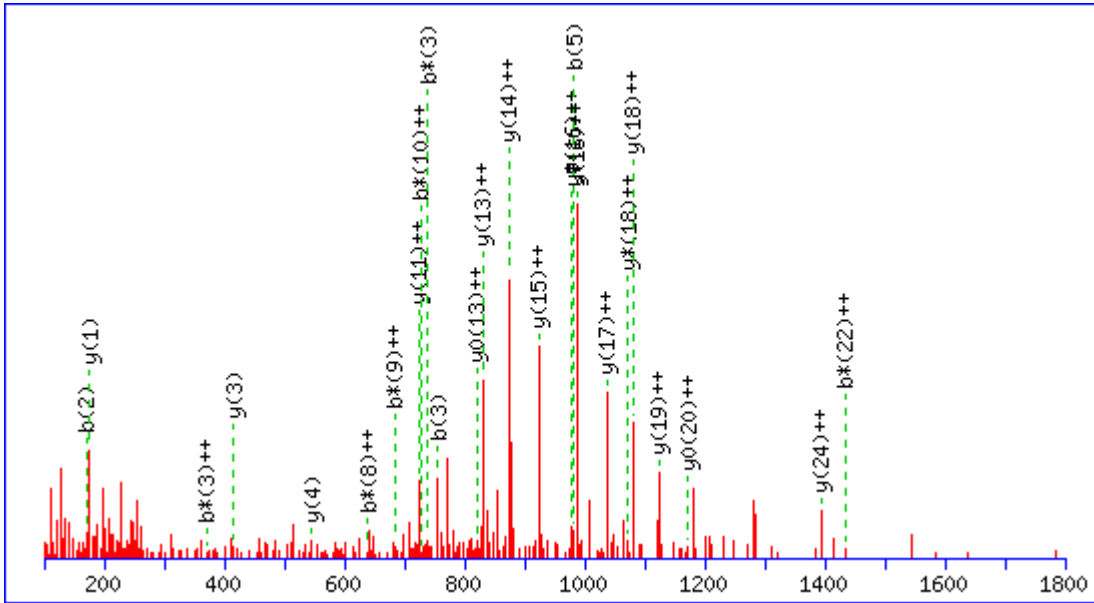
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 72.0444 | 36.5258 | | | | | A | | | | | | | 24 |
| 2 | 173.0921 | 87.0497 | | | 155.0815 | 78.0444 | T | 2891.3290 | 1446.1681 | 2874.3024 | 1437.6548 | 2873.3184 | 1437.1628 | 23 |
| 3 | 230.1135 | 115.5604 | | | 212.1030 | 106.5551 | G | 2790.2813 | 1395.6443 | 2773.2547 | 1387.1310 | 2772.2707 | 1386.6390 | 22 |
| 4 | 345.1405 | 173.0739 | | | 327.1299 | 164.0686 | D | 2733.2598 | 1367.1335 | 2716.2333 | 1358.6203 | 2715.2493 | 1358.1283 | 21 |
| 5 | 474.1831 | 237.5952 | | | 456.1725 | 228.5899 | E | 2618.2329 | 1309.6201 | 2601.2063 | 1301.1068 | 2600.2223 | 1300.6148 | 20 |
| 6 | 575.2307 | 288.1190 | | | 557.2202 | 279.1137 | T | 2489.1903 | 1245.0988 | 2472.1637 | 1236.5855 | 2471.1797 | 1236.0935 | 19 |
| 7 | 632.2522 | 316.6297 | | | 614.2416 | 307.6245 | G | 2388.1426 | 1194.5749 | 2371.1161 | 1186.0617 | 2370.1320 | 1185.5697 | 18 |
| 8 | 703.2893 | 352.1483 | | | 685.2788 | 343.1430 | A | 2331.1211 | 1166.0642 | 2314.0946 | 1157.5509 | 2313.1106 | 1157.0589 | 17 |
| 9 | 1288.5764 | 644.7918 | 1271.5499 | 636.2786 | 1270.5658 | 635.7866 | K | 2260.0840 | 1130.5457 | 2243.0575 | 1122.0324 | 2242.0735 | 1121.5404 | 16 |
| 10 | 1387.6448 | 694.3260 | 1370.6183 | 685.8128 | 1369.6342 | 685.3208 | V | 1674.7970 | 837.9021 | 1657.7704 | 829.3888 | 1656.7864 | 828.8968 | 15 |
| 11 | 1516.6874 | 758.8473 | 1499.6609 | 750.3341 | 1498.6768 | 749.8421 | E | 1575.7285 | 788.3679 | 1558.7020 | 779.8546 | 1557.7180 | 779.3626 | 14 |
| 12 | 1672.7885 | 836.8979 | 1655.7620 | 828.3846 | 1654.7780 | 827.8926 | R | 1446.6860 | 723.8466 | 1429.6594 | 715.3333 | 1428.6754 | 714.8413 | 13 |
| 13 | 1743.8256 | 872.4165 | 1726.7991 | 863.9032 | 1725.8151 | 863.4112 | A | 1290.5848 | 645.7961 | 1273.5583 | 637.2828 | 1272.5743 | 636.7908 | 12 |
| 14 | 1858.8526 | 929.9299 | 1841.8260 | 921.4167 | 1840.8420 | 920.9246 | D | 1219.5477 | 610.2775 | 1202.5212 | 601.7642 | 1201.5372 | 601.2722 | 11 |
| 15 | 1915.8740 | 958.4407 | 1898.8475 | 949.9274 | 1897.8635 | 949.4354 | G | 1104.5208 | 552.7640 | 1087.4942 | 544.2508 | 1086.5102 | 543.7587 | 10 |
| 16 | 2078.9374 | 1039.9723 | 2061.9108 | 1031.4590 | 2060.9268 | 1030.9670 | Y | 1047.4993 | 524.2533 | 1030.4728 | 515.7400 | 1029.4888 | 515.2480 | 9 |
| 17 | 2207.9800 | 1104.4936 | 2190.9534 | 1095.9803 | 2189.9694 | 1095.4883 | E | 884.4360 | 442.7216 | 867.4094 | 434.2084 | 866.4254 | 433.7164 | 8 |
| 18 | 2305.0327 | 1153.0200 | 2288.0062 | 1144.5067 | 2287.0222 | 1144.0147 | P | 755.3934 | 378.2003 | 738.3668 | 369.6871 | 737.3828 | 369.1951 | 7 |
| 19 | 2402.0855 | 1201.5464 | 2385.0589 | 1193.0331 | 2384.0749 | 1192.5411 | P | 658.3406 | 329.6740 | 641.3141 | 321.1607 | 640.3301 | 320.6687 | 6 |
| 20 | 2501.1539 | 1251.0806 | 2484.1274 | 1242.5673 | 2483.1433 | 1242.0753 | V | 561.2879 | 281.1476 | 544.2613 | 272.6343 | 543.2773 | 272.1423 | 5 |
| 21 | 2629.2125 | 1315.1099 | 2612.1859 | 1306.5966 | 2611.2019 | 1306.1046 | Q | 462.2195 | 231.6134 | 445.1929 | 223.1001 | 444.2089 | 222.6081 | 4 |
| 22 | 2758.2551 | 1379.6312 | 2741.2285 | 1371.1179 | 2740.2445 | 1370.6259 | E | 334.1609 | 167.5841 | | | 316.1503 | 158.5788 | 3 |
| 23 | 2845.2871 | 1423.1472 | 2828.2606 | 1414.6339 | 2827.2765 | 1414.1419 | S | 205.1183 | 103.0628 | | | 187.1077 | 94.0575 | 2 |
| 24 | | | | | | | V | 118.0863 | 59.5468 | | | | | 1 |



IDENTIFICATION 7

MS/MS Fragmentation of **AVKPEPTNSSVEVSPDIYQQVRDELKR**

Found in **Q9UPW6**, DNA-binding protein SATB2 OS=Homo sapiens GN=SATB2 PE=1 SV=2



Monoisotopic mass of neutral peptide Mr(calc): 3541.7648

Variable modifications:

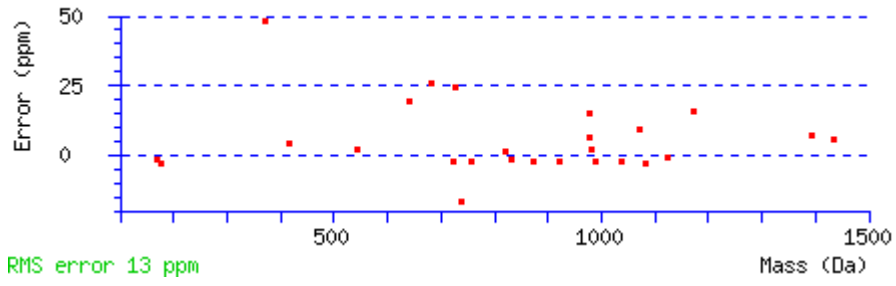
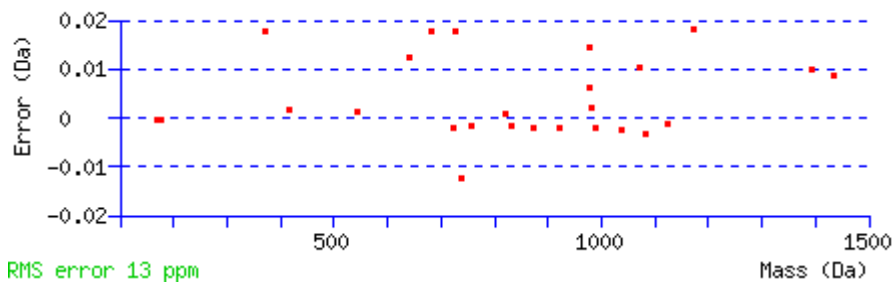
K3 : Sumo 3 (K)

N8 : Deamidated (NQ)

Ions Score: 25 Expect: 7.9

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 72.0444 | 36.5258 | | | | | A | | | | | | | 27 |
| 2 | 171.1128 | 86.0600 | | | | | V | 3471.7350 | 1736.3712 | 3454.7085 | 1727.8579 | 3453.7245 | 1727.3659 | 26 |
| 3 | 756.3999 | 378.7036 | 739.3733 | 370.1903 | | | K | 3372.6666 | 1686.8369 | 3355.6401 | 1678.3237 | 3354.6561 | 1677.8317 | 25 |
| 4 | 853.4526 | 427.2300 | 836.4261 | 418.7167 | | | P | 2787.3795 | 1394.1934 | 2770.3530 | 1385.6801 | 2769.3690 | 1385.1881 | 24 |
| 5 | 982.4952 | 491.7513 | 965.4687 | 483.2380 | 964.4847 | 482.7460 | E | 2690.3268 | 1345.6670 | 2673.3002 | 1337.1538 | 2672.3162 | 1336.6617 | 23 |
| 6 | 1079.5480 | 540.2776 | 1062.5215 | 531.7644 | 1061.5374 | 531.2724 | P | 2561.2842 | 1281.1457 | 2544.2576 | 1272.6325 | 2543.2736 | 1272.1404 | 22 |
| 7 | 1180.5957 | 590.8015 | 1163.5691 | 582.2882 | 1162.5851 | 581.7962 | T | 2464.2314 | 1232.6193 | 2447.2049 | 1224.1061 | 2446.2209 | 1223.6141 | 21 |
| 8 | 1295.6226 | 648.3149 | 1278.5961 | 639.8017 | 1277.6121 | 639.3097 | N | 2363.1837 | 1182.0955 | 2346.1572 | 1173.5822 | 2345.1732 | 1173.0902 | 20 |
| 9 | 1382.6546 | 691.8310 | 1365.6281 | 683.3177 | 1364.6441 | 682.8257 | S | 2248.1568 | 1124.5820 | 2231.1303 | 1116.0688 | 2230.1462 | 1115.5768 | 19 |
| 10 | 1469.6867 | 735.3470 | 1452.6601 | 726.8337 | 1451.6761 | 726.3417 | S | 2161.1248 | 1081.0660 | 2144.0982 | 1072.5527 | 2143.1142 | 1072.0607 | 18 |
| 11 | 1568.7551 | 784.8812 | 1551.7285 | 776.3679 | 1550.7445 | 775.8759 | V | 2074.0927 | 1037.5500 | 2057.0662 | 1029.0367 | 2056.0822 | 1028.5447 | 17 |
| 12 | 1697.7977 | 849.4025 | 1680.7711 | 840.8892 | 1679.7871 | 840.3972 | E | 1975.0243 | 988.0158 | 1957.9978 | 979.5025 | 1957.0138 | 979.0105 | 16 |
| 13 | 1796.8661 | 898.9367 | 1779.8395 | 890.4234 | 1778.8555 | 889.9314 | V | 1845.9817 | 923.4945 | 1828.9552 | 914.9812 | 1827.9712 | 914.4892 | 15 |
| 14 | 1883.8981 | 942.4527 | 1866.8716 | 933.9394 | 1865.8876 | 933.4474 | S | 1746.9133 | 873.9603 | 1729.8868 | 865.4470 | 1728.9028 | 864.9550 | 14 |
| 15 | 1980.9509 | 990.9791 | 1963.9243 | 982.4658 | 1962.9403 | 981.9738 | P | 1659.8813 | 830.4443 | 1642.8547 | 821.9310 | 1641.8707 | 821.4390 | 13 |
| 16 | 2095.9778 | 1048.4926 | 2078.9513 | 1039.9793 | 2077.9673 | 1039.4873 | D | 1562.8285 | 781.9179 | 1545.8020 | 773.4046 | 1544.8180 | 772.9126 | 12 |
| 17 | 2209.0619 | 1105.0346 | 2192.0353 | 1096.5213 | 2191.0513 | 1096.0293 | I | 1447.8016 | 724.4044 | 1430.7750 | 715.8912 | 1429.7910 | 715.3992 | 11 |
| 18 | 2372.1252 | 1186.5663 | 2355.0987 | 1178.0530 | 2354.1147 | 1177.5610 | Y | 1334.7175 | 667.8624 | 1317.6910 | 659.3491 | 1316.7070 | 658.8571 | 10 |
| 19 | 2500.1838 | 1250.5955 | 2483.1573 | 1242.0823 | 2482.1732 | 1241.5903 | Q | 1171.6542 | 586.3307 | 1154.6276 | 577.8175 | 1153.6436 | 577.3255 | 9 |
| 20 | 2628.2424 | 1314.6248 | 2611.2158 | 1306.1116 | 2610.2318 | 1305.6195 | Q | 1043.5956 | 522.3014 | 1026.5691 | 513.7882 | 1025.5851 | 513.2962 | 8 |
| 21 | 2727.3108 | 1364.1590 | 2710.2842 | 1355.6458 | 2709.3002 | 1355.1538 | V | 915.5370 | 458.2722 | 898.5105 | 449.7589 | 897.5265 | 449.2669 | 7 |
| 22 | 2883.4119 | 1442.2096 | 2866.3854 | 1433.6963 | 2865.4013 | 1433.2043 | R | 816.4686 | 408.7380 | 799.4421 | 400.2247 | 798.4581 | 399.7327 | 6 |
| 23 | 2998.4389 | 1499.7231 | 2981.4123 | 1491.2098 | 2980.4283 | 1490.7178 | D | 660.3675 | 330.6874 | 643.3410 | 322.1741 | 642.3570 | 321.6821 | 5 |
| 24 | 3127.4814 | 1564.2444 | 3110.4549 | 1555.7311 | 3109.4709 | 1555.2391 | E | 545.3406 | 273.1739 | 528.3140 | 264.6606 | 527.3300 | 264.1686 | 4 |
| 25 | 3240.5655 | 1620.7864 | 3223.5390 | 1612.2731 | 3222.5549 | 1611.7811 | L | 416.2980 | 208.6526 | 399.2714 | 200.1394 | | | 3 |
| 26 | 3368.6605 | 1684.8339 | 3351.6339 | 1676.3206 | 3350.6499 | 1675.8286 | K | 303.2139 | 152.1106 | 286.1874 | 143.5973 | | | 2 |

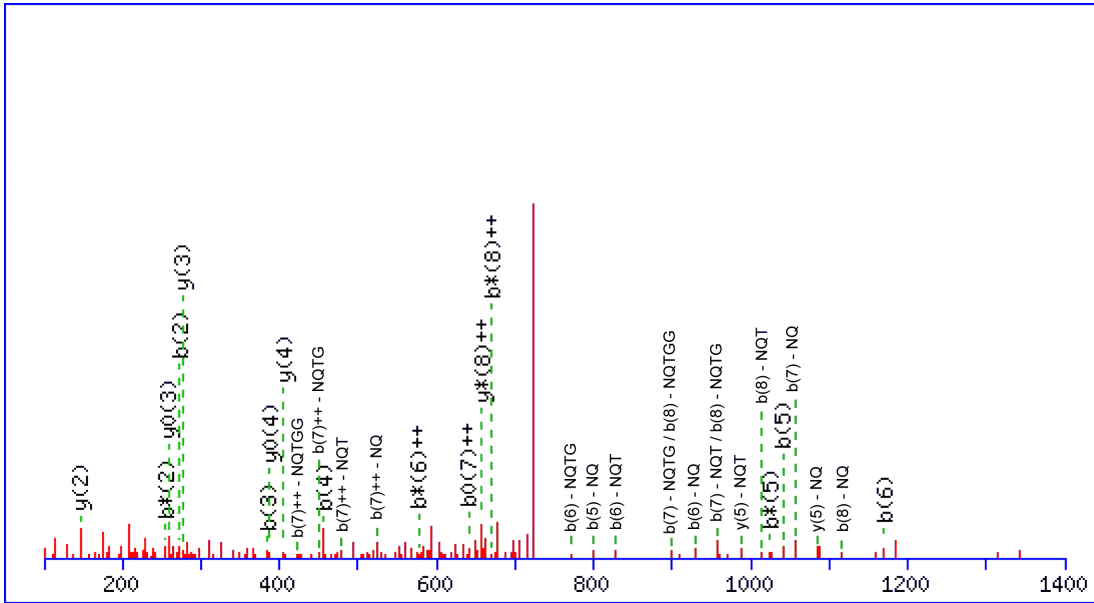
| | | | | | | | | | | | | | | |
|----|--|--|--|--|--|--|---|----------|---------|----------|---------|--|--|---|
| 27 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |
|----|--|--|--|--|--|--|---|----------|---------|----------|---------|--|--|---|



IDENTIFICATION 8

MS/MS Fragmentation of **DRIAKEEGA**

Found in **P39023**, 60S ribosomal protein L3 OS=Homo sapiens GN=RPL3 PE=1 SV=2



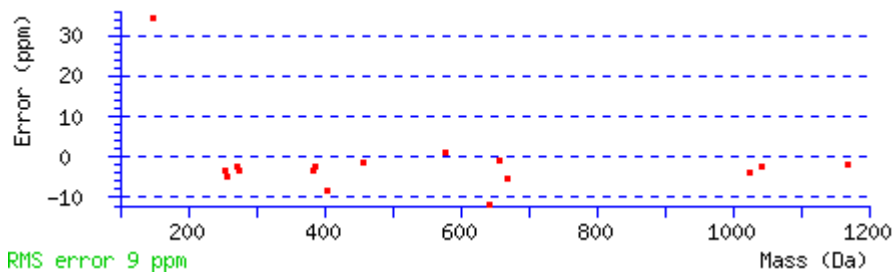
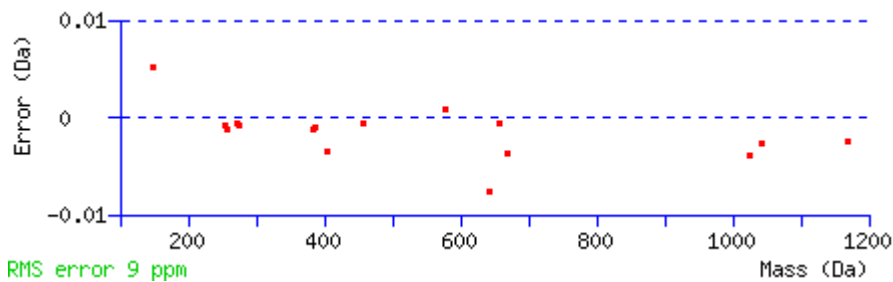
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1444.6906

Variable modifications:

K5 : Sumo 3 (K)

Ions Score: 1 Expect: 9.5e+02

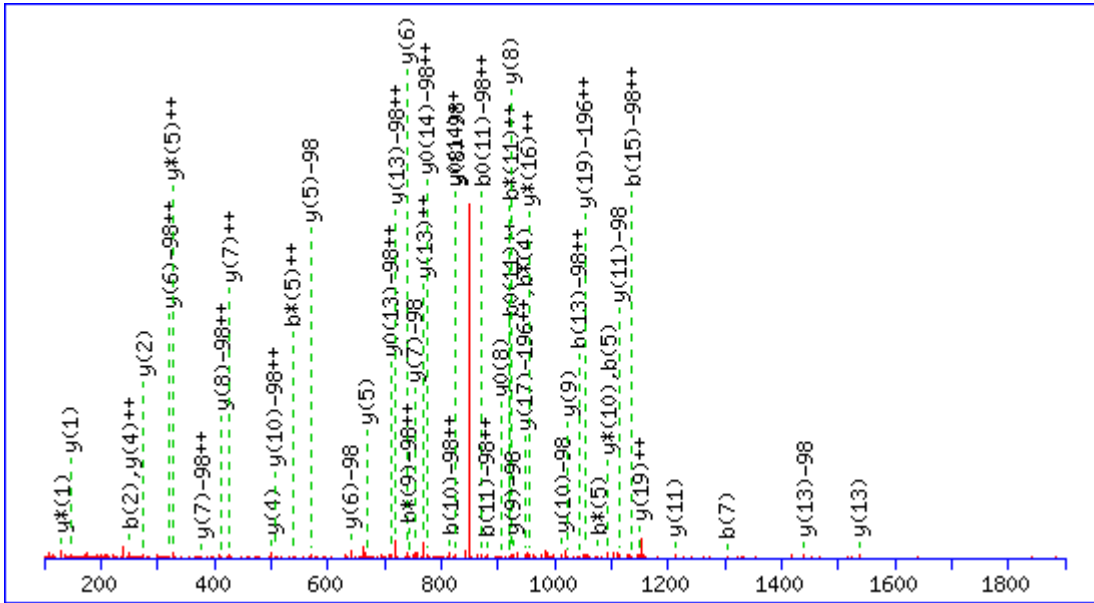
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|---|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|---|
| 1 | 116.0342 | 58.5207 | | | 98.0237 | 49.5155 | D | | | | | | | 9 |
| 2 | 272.1353 | 136.5713 | 255.1088 | 128.0580 | 254.1248 | 127.5660 | R | 1330.6710 | 665.8391 | 1313.6444 | 657.3258 | 1312.6604 | 656.8338 | 8 |
| 3 | 385.2194 | 193.1133 | 368.1928 | 184.6001 | 367.2088 | 184.1081 | I | 1174.5699 | 587.7886 | 1157.5433 | 579.2753 | 1156.5593 | 578.7833 | 7 |
| 4 | 456.2565 | 228.6319 | 439.2300 | 220.1186 | 438.2459 | 219.6266 | A | 1061.4858 | 531.2465 | 1044.4592 | 522.7333 | 1043.4752 | 522.2413 | 6 |
| 5 | 1041.5436 | 521.2754 | 1024.5170 | 512.7622 | 1023.5330 | 512.2701 | K | 990.4487 | 495.7280 | 973.4221 | 487.2147 | 972.4381 | 486.7227 | 5 |
| 6 | 1170.5862 | 585.7967 | 1153.5596 | 577.2835 | 1152.5756 | 576.7914 | E | 405.1616 | 203.0844 | | | 387.1510 | 194.0792 | 4 |
| 7 | 1299.6288 | 650.3180 | 1282.6022 | 641.8047 | 1281.6182 | 641.3127 | E | 276.1190 | 138.5631 | | | 258.1084 | 129.5579 | 3 |
| 8 | 1356.6502 | 678.8288 | 1339.6237 | 670.3155 | 1338.6397 | 669.8235 | G | 147.0764 | 74.0418 | | | | | 2 |
| 9 | | | | | | | A | 90.0550 | 45.5311 | | | | | 1 |



IDENTIFICATION 9

MS/MS Fragmentation of **HIKEEPLSEEEPCTSTAIASPEKK**

Found in **Q9Y2X3**, Nucleolar protein 58 OS=Homo sapiens GN=NOP58 PE=1 SV=1



Monoisotopic mass of neutral peptide Mr(calc): 3394.4676

Variable modifications:

K3 : Sumo 3 (K)

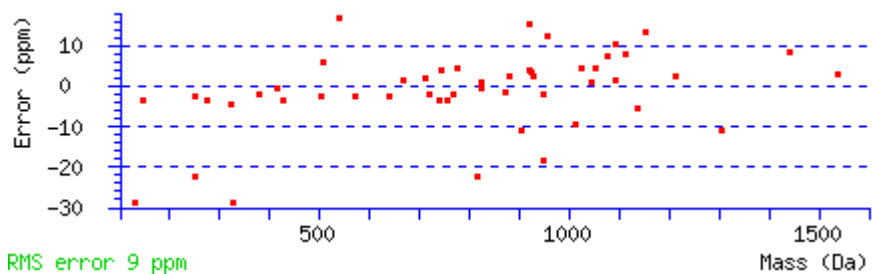
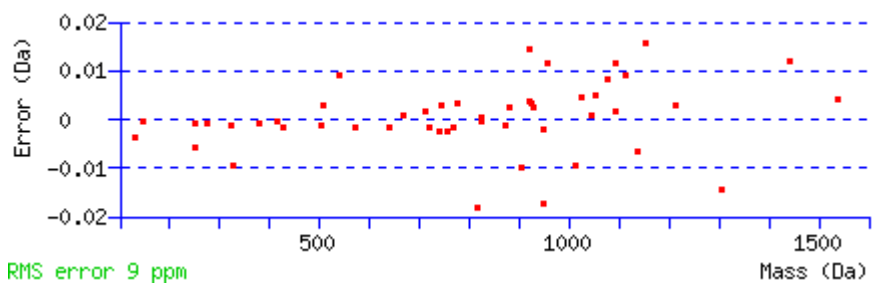
S8 : Phospho (ST), with neutral losses 97.9769 (shown in table), 0.0000

C13 : Nethylmaleimide (C)

S20 : Phospho (ST), with neutral losses 97.9769 (shown in table), 0.0000

Ions Score: 13 Expect: 4.7e+02

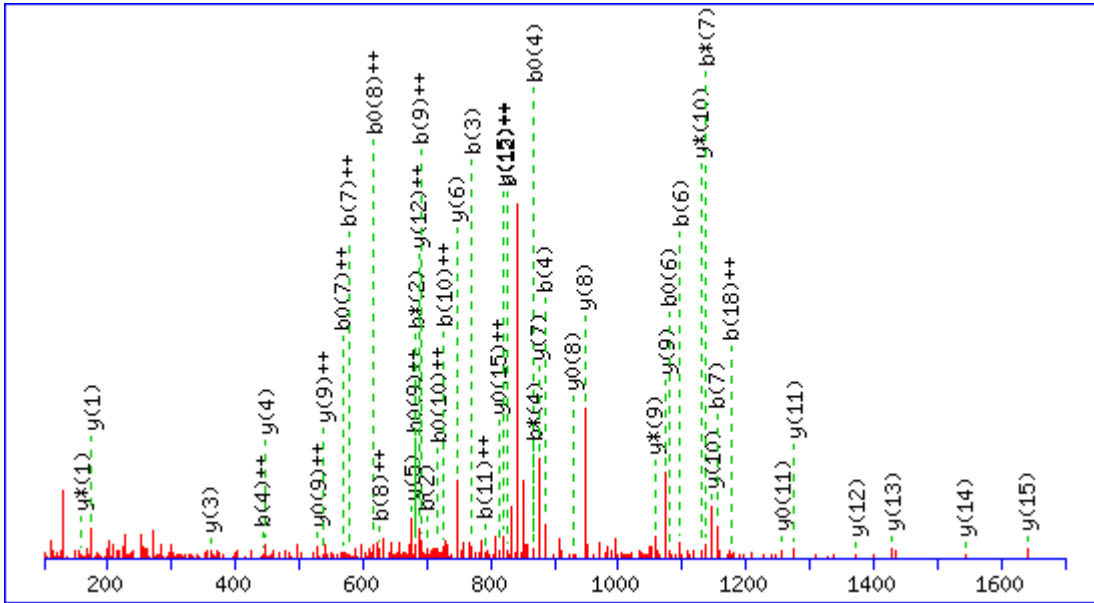
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 138.0662 | 69.5367 | | | | | H | | | | | | | 24 |
| 2 | 251.1503 | 126.0788 | | | | | I | 3062.4623 | 1531.7348 | 3045.4357 | 1523.2215 | 3044.4517 | 1522.7295 | 23 |
| 3 | 836.4373 | 418.7223 | 819.4108 | 410.2090 | | | K | 2949.3782 | 1475.1927 | 2932.3517 | 1466.6795 | 2931.3677 | 1466.1875 | 22 |
| 4 | 965.4799 | 483.2436 | 948.4534 | 474.7303 | 947.4694 | 474.2383 | E | 2364.0911 | 1182.5492 | 2347.0646 | 1174.0359 | 2346.0806 | 1173.5439 | 21 |
| 5 | 1094.5225 | 547.7649 | 1077.4960 | 539.2516 | 1076.5119 | 538.7596 | E | 2235.0486 | 1118.0279 | 2218.0220 | 1109.5146 | 2217.0380 | 1109.0226 | 20 |
| 6 | 1191.5753 | 596.2913 | 1174.5487 | 587.7780 | 1173.5647 | 587.2860 | P | 2106.0060 | 1053.5066 | 2088.9794 | 1044.9933 | 2087.9954 | 1044.5013 | 19 |
| 7 | 1304.6593 | 652.8333 | 1287.6328 | 644.3200 | 1286.6488 | 643.8280 | L | 2008.9532 | 1004.9802 | 1991.9267 | 996.4670 | 1990.9426 | 995.9750 | 18 |
| 8 | 1373.6808 | 687.3440 | 1356.6543 | 678.8308 | 1355.6702 | 678.3388 | S | 1895.8691 | 948.4382 | 1878.8426 | 939.9249 | 1877.8586 | 939.4329 | 17 |
| 9 | 1502.7234 | 751.8653 | 1485.6968 | 743.3521 | 1484.7128 | 742.8601 | E | 1826.8477 | 913.9275 | 1809.8211 | 905.4142 | 1808.8371 | 904.9222 | 16 |
| 10 | 1631.7660 | 816.3866 | 1614.7394 | 807.8734 | 1613.7554 | 807.3814 | E | 1697.8051 | 849.4062 | 1680.7785 | 840.8929 | 1679.7945 | 840.4009 | 15 |
| 11 | 1760.8086 | 880.9079 | 1743.7820 | 872.3947 | 1742.7980 | 871.9026 | E | 1568.7625 | 784.8849 | 1551.7359 | 776.3716 | 1550.7519 | 775.8796 | 14 |
| 12 | 1857.8613 | 929.4343 | 1840.8348 | 920.9210 | 1839.8508 | 920.4290 | P | 1439.7199 | 720.3636 | 1422.6933 | 711.8503 | 1421.7093 | 711.3583 | 13 |
| 13 | 2085.9182 | 1043.4627 | 2068.8917 | 1034.9495 | 2067.9076 | 1034.4575 | C | 1342.6671 | 671.8372 | 1325.6406 | 663.3239 | 1324.6566 | 662.8319 | 12 |
| 14 | 2186.9659 | 1093.9866 | 2169.9393 | 1085.4733 | 2168.9553 | 1084.9813 | T | 1114.6103 | 557.8088 | 1097.5837 | 549.2955 | 1096.5997 | 548.8035 | 11 |
| 15 | 2273.9979 | 1137.5026 | 2256.9714 | 1128.9893 | 2255.9874 | 1128.4973 | S | 1013.5626 | 507.2849 | 996.5360 | 498.7717 | 995.5520 | 498.2796 | 10 |
| 16 | 2375.0456 | 1188.0264 | 2358.0190 | 1179.5132 | 2357.0350 | 1179.0212 | T | 926.5306 | 463.7689 | 909.5040 | 455.2556 | 908.5200 | 454.7636 | 9 |
| 17 | 2446.0827 | 1223.5450 | 2429.0562 | 1215.0317 | 2428.0721 | 1214.5397 | A | 825.4829 | 413.2451 | 808.4563 | 404.7318 | 807.4723 | 404.2398 | 8 |
| 18 | 2559.1668 | 1280.0870 | 2542.1402 | 1271.5738 | 2541.1562 | 1271.0817 | I | 754.4458 | 377.7265 | 737.4192 | 369.2132 | 736.4352 | 368.7212 | 7 |
| 19 | 2630.2039 | 1315.6056 | 2613.1773 | 1307.0923 | 2612.1933 | 1306.6003 | A | 641.3617 | 321.1845 | 624.3352 | 312.6712 | 623.3511 | 312.1792 | 6 |
| 20 | 2699.2254 | 1350.1163 | 2682.1988 | 1341.6030 | 2681.2148 | 1341.1110 | S | 570.3246 | 285.6659 | 553.2980 | 277.1527 | 552.3140 | 276.6606 | 5 |
| 21 | 2796.2781 | 1398.6427 | 2779.2516 | 1390.1294 | 2778.2676 | 1389.6374 | P | 501.3031 | 251.1552 | 484.2766 | 242.6419 | 483.2926 | 242.1499 | 4 |
| 22 | 2925.3207 | 1463.1640 | 2908.2942 | 1454.6507 | 2907.3101 | 1454.1587 | E | 404.2504 | 202.6288 | 387.2238 | 194.1155 | 386.2398 | 193.6235 | 3 |
| 23 | 3053.4157 | 1527.2115 | 3036.3891 | 1518.6982 | 3035.4051 | 1518.2062 | K | 275.2078 | 138.1075 | 258.1812 | 129.5942 | | | 2 |
| 24 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 10

MS/MS Fragmentation of **IKADPDGPEAQAEACSGER**

Found in **Q9NX24**, H/A CA ribonucleoprotein complex subunit 2 OS=Homo sapiens GN=NHP2 PE=1 SV=1



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2525.1088

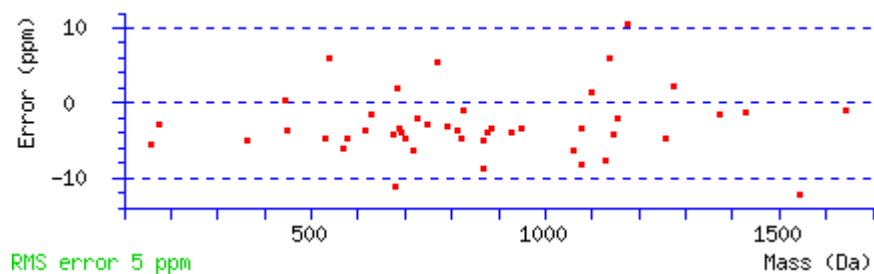
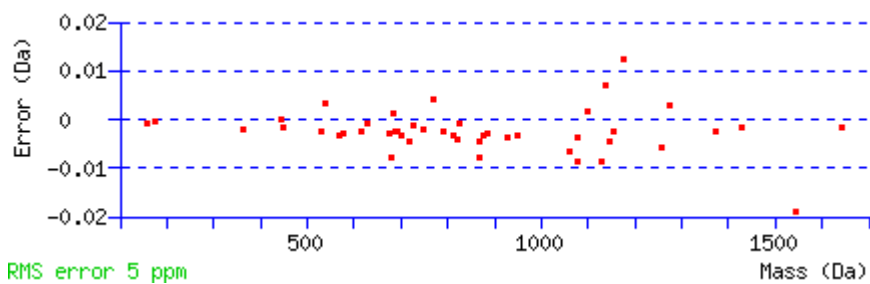
Variable modifications:

K2 : Sumo 3 (K)

C15 : Nethylmaleimide (C)

Ions Score: 100 Expect: 5.1e-07

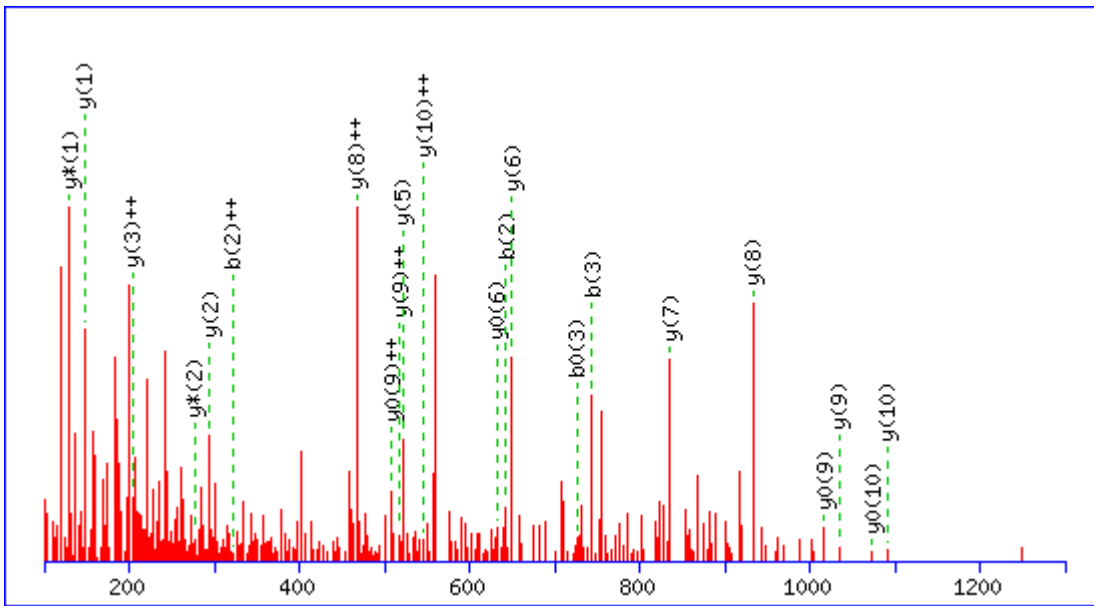
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0913 | 57.5493 | | | | | I | | | | | | | 19 |
| 2 | 699.3784 | 350.1928 | 682.3519 | 341.6796 | | | K | 2413.0321 | 1207.0197 | 2396.0055 | 1198.5064 | 2395.0215 | 1198.0144 | 18 |
| 3 | 770.4155 | 385.7114 | 753.3890 | 377.1981 | | | A | 1827.7450 | 914.3761 | 1810.7184 | 905.8629 | 1809.7344 | 905.3709 | 17 |
| 4 | 885.4425 | 443.2249 | 868.4159 | 434.7116 | 867.4319 | 434.2196 | D | 1756.7079 | 878.8576 | 1739.6813 | 870.3443 | 1738.6973 | 869.8523 | 16 |
| 5 | 982.4952 | 491.7513 | 965.4687 | 483.2380 | 964.4847 | 482.7460 | P | 1641.6809 | 821.3441 | 1624.6544 | 812.8308 | 1623.6704 | 812.3388 | 15 |
| 6 | 1097.5222 | 549.2647 | 1080.4956 | 540.7515 | 1079.5116 | 540.2594 | D | 1544.6282 | 772.8177 | 1527.6016 | 764.3045 | 1526.6176 | 763.8124 | 14 |
| 7 | 1154.5436 | 577.7755 | 1137.5171 | 569.2622 | 1136.5331 | 568.7702 | G | 1429.6012 | 715.3043 | 1412.5747 | 706.7910 | 1411.5907 | 706.2990 | 13 |
| 8 | 1251.5964 | 626.3018 | 1234.5699 | 617.7886 | 1233.5858 | 617.2966 | P | 1372.5798 | 686.7935 | 1355.5532 | 678.2802 | 1354.5692 | 677.7882 | 12 |
| 9 | 1380.6390 | 690.8231 | 1363.6125 | 682.3099 | 1362.6284 | 681.8179 | E | 1275.5270 | 638.2671 | 1258.5005 | 629.7539 | 1257.5164 | 629.2619 | 11 |
| 10 | 1451.6761 | 726.3417 | 1434.6496 | 717.8284 | 1433.6655 | 717.3364 | A | 1146.4844 | 573.7458 | 1129.4579 | 565.2326 | 1128.4738 | 564.7406 | 10 |
| 11 | 1579.7347 | 790.3710 | 1562.7081 | 781.8577 | 1561.7241 | 781.3657 | Q | 1075.4473 | 538.2273 | 1058.4208 | 529.7140 | 1057.4367 | 529.2220 | 9 |
| 12 | 1650.7718 | 825.8895 | 1633.7453 | 817.3763 | 1632.7612 | 816.8843 | A | 947.3887 | 474.1980 | 930.3622 | 465.6847 | 929.3782 | 465.1927 | 8 |
| 13 | 1779.8144 | 890.4108 | 1762.7878 | 881.8976 | 1761.8038 | 881.4056 | E | 876.3516 | 438.6794 | 859.3251 | 430.1662 | 858.3410 | 429.6742 | 7 |
| 14 | 1850.8515 | 925.9294 | 1833.8250 | 917.4161 | 1832.8409 | 916.9241 | A | 747.3090 | 374.1581 | 730.2825 | 365.6449 | 729.2985 | 365.1529 | 6 |
| 15 | 2078.9084 | 1039.9578 | 2061.8818 | 1031.4446 | 2060.8978 | 1030.9525 | C | 676.2719 | 338.6396 | 659.2454 | 330.1263 | 658.2613 | 329.6343 | 5 |
| 16 | 2165.9404 | 1083.4738 | 2148.9139 | 1074.9606 | 2147.9298 | 1074.4686 | S | 448.2150 | 224.6112 | 431.1885 | 216.0979 | 430.2045 | 215.6059 | 4 |
| 17 | 2222.9619 | 1111.9846 | 2205.9353 | 1103.4713 | 2204.9513 | 1102.9793 | G | 361.1830 | 181.0951 | 344.1565 | 172.5819 | 343.1724 | 172.0899 | 3 |
| 18 | 2352.0045 | 1176.5059 | 2334.9779 | 1167.9926 | 2333.9939 | 1167.5006 | E | 304.1615 | 152.5844 | 287.1350 | 144.0711 | 286.1510 | 143.5791 | 2 |
| 19 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 11

MS/MS Fragmentation of **KGTPWEGGLFK**

Found in **P63279**, SUMO-conjugating enzyme UBC9 OS=Homo sapiens GN=UBE2I PE=1 SV=1



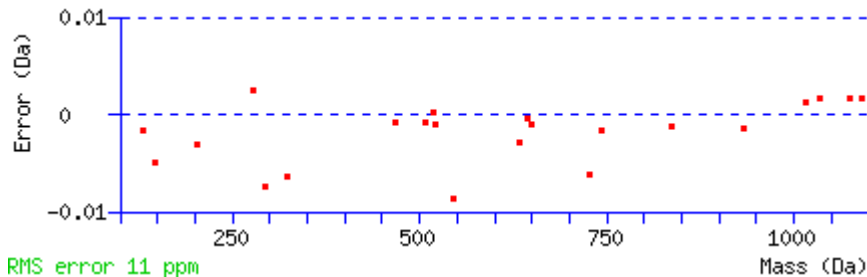
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1675.8318

Variable modifications:

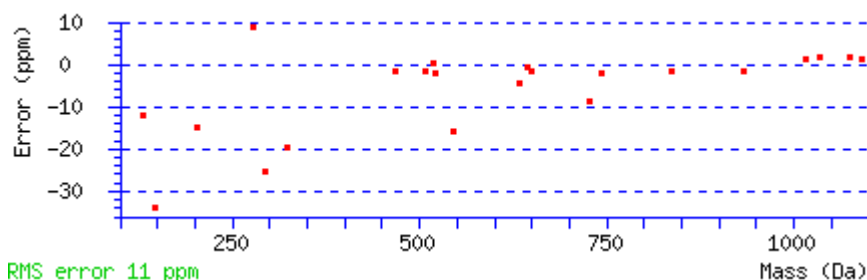
K1 : Sumo 3 (K)

Ions Score: 26 Expect: 2.9

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 586.2944 | 293.6508 | 569.2678 | 285.1375 | | | K | | | | | | | 11 |
| 2 | 643.3158 | 322.1615 | 626.2893 | 313.6483 | | | G | 1091.5520 | 546.2796 | 1074.5255 | 537.7664 | 1073.5415 | 537.2744 | 10 |
| 3 | 744.3635 | 372.6854 | 727.3369 | 364.1721 | 726.3529 | 363.6801 | T | 1034.5306 | 517.7689 | 1017.5040 | 509.2556 | 1016.5200 | 508.7636 | 9 |
| 4 | 841.4163 | 421.2118 | 824.3897 | 412.6985 | 823.4057 | 412.2065 | P | 933.4829 | 467.2451 | 916.4563 | 458.7318 | 915.4723 | 458.2398 | 8 |
| 5 | 1027.4956 | 514.2514 | 1010.4690 | 505.7381 | 1009.4850 | 505.2461 | W | 836.4301 | 418.7187 | 819.4036 | 410.2054 | 818.4196 | 409.7134 | 7 |
| 6 | 1156.5382 | 578.7727 | 1139.5116 | 570.2594 | 1138.5276 | 569.7674 | E | 650.3508 | 325.6790 | 633.3243 | 317.1658 | 632.3402 | 316.6738 | 6 |
| 7 | 1213.5596 | 607.2835 | 1196.5331 | 598.7702 | 1195.5491 | 598.2782 | G | 521.3082 | 261.1577 | 504.2817 | 252.6445 | | | 5 |
| 8 | 1270.5811 | 635.7942 | 1253.5545 | 627.2809 | 1252.5705 | 626.7889 | G | 464.2867 | 232.6470 | 447.2602 | 224.1337 | | | 4 |
| 9 | 1383.6652 | 692.3362 | 1366.6386 | 683.8229 | 1365.6546 | 683.3309 | L | 407.2653 | 204.1363 | 390.2387 | 195.6230 | | | 3 |
| 10 | 1530.7336 | 765.8704 | 1513.7070 | 757.3571 | 1512.7230 | 756.8651 | F | 294.1812 | 147.5942 | 277.1547 | 139.0810 | | | 2 |
| 11 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



RMS error 11 ppm

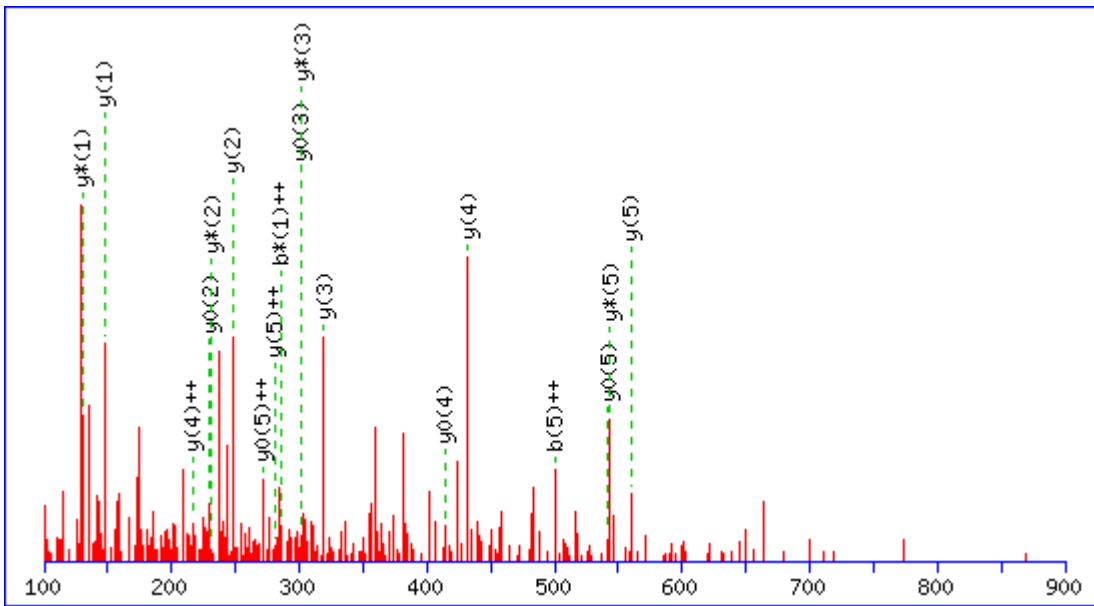


RMS error 11 ppm

IDENTIFICATION 12

MS/MS Fragmentation of **KQLATK**

Found in **Q16695**, Histone H3.1t OS=Homo sapiens GN=HIST3H3 PE=1 SV=3



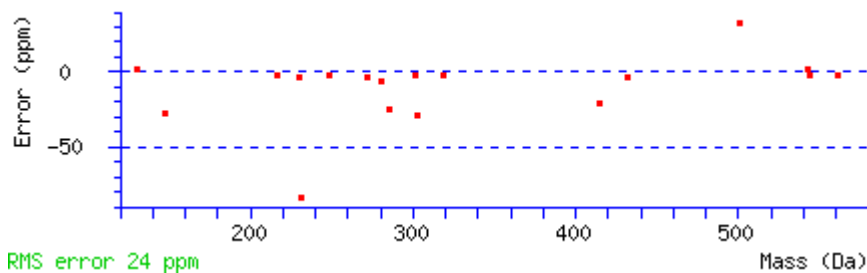
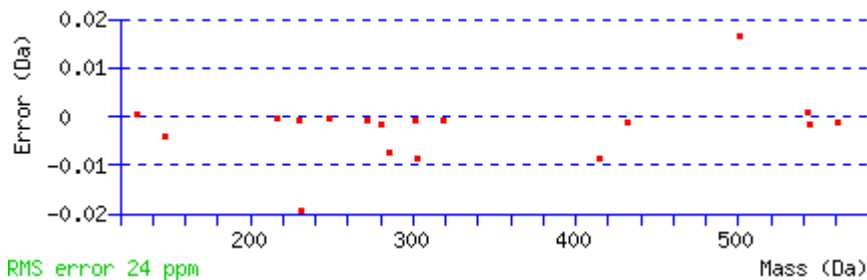
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1144.6200

Variable modifications:

K1 : Sumo 3 (K)

Ions Score: 17 Expect: 9.6

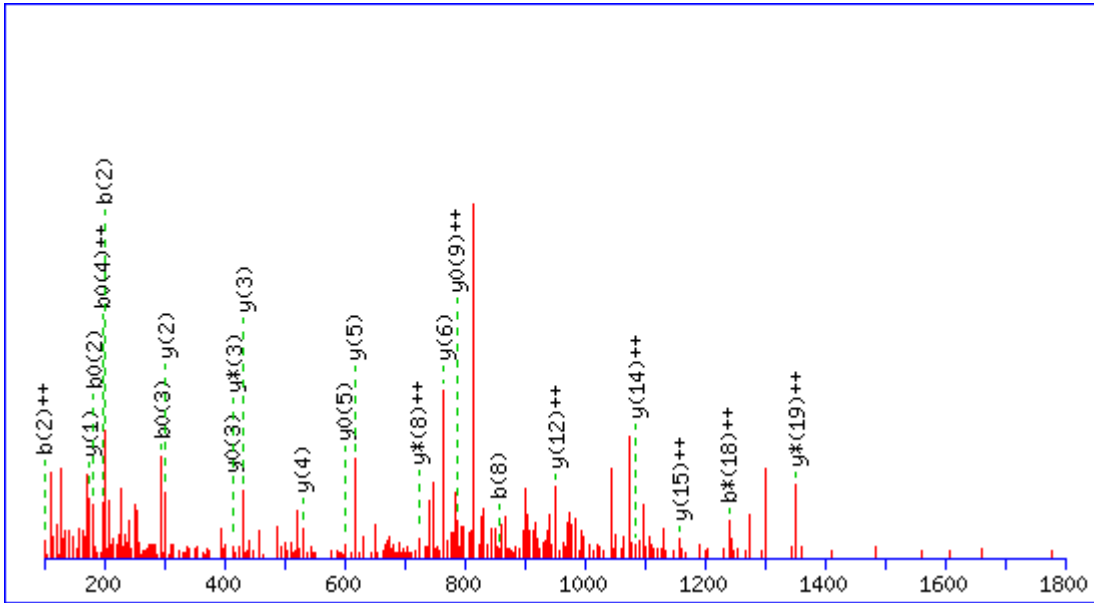
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|---|----------|-----------------|----------------|------------------|----------------|------------------|------|----------|-----------------|----------------|------------------|----------------|------------------|---|
| 1 | 586.2944 | 293.6508 | 569.2678 | 285.1375 | | | K | | | | | | | 6 |
| 2 | 714.3529 | 357.6801 | 697.3264 | 349.1668 | | | Q | 560.3402 | 280.6738 | 543.3137 | 272.1605 | 542.3297 | 271.6685 | 5 |
| 3 | 827.4370 | 414.2221 | 810.4104 | 405.7089 | | | L | 432.2817 | 216.6445 | 415.2551 | 208.1312 | 414.2711 | 207.6392 | 4 |
| 4 | 898.4741 | 449.7407 | 881.4476 | 441.2274 | | | A | 319.1976 | 160.1024 | 302.1710 | 151.5892 | 301.1870 | 151.0972 | 3 |
| 5 | 999.5218 | 500.2645 | 982.4952 | 491.7513 | 981.5112 | 491.2592 | T | 248.1605 | 124.5839 | 231.1339 | 116.0706 | 230.1499 | 115.5786 | 2 |
| 6 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 13

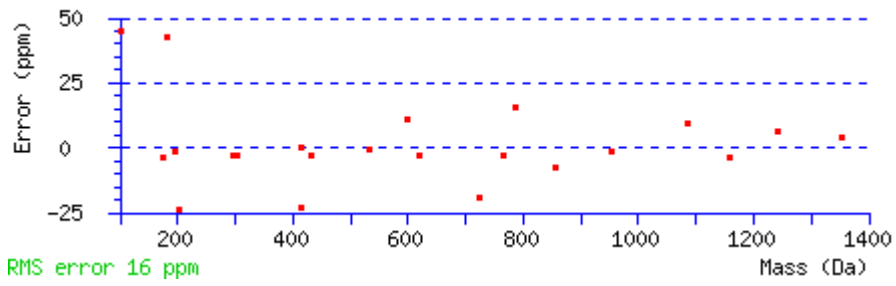
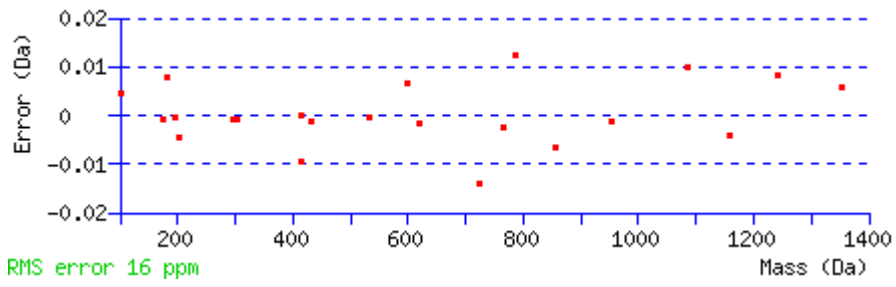
MS/MS Fragmentation of **LSLPESTESFHEPSQELKFSVEQR**

Found in **Q9H2Y7**, Zinc finger protein 106 homolog OS=Homo sapiens GN=ZFP106 PE=1 SV=1



Monoisotopic mass of neutral peptide Mr(calc): 3260.5585 Variable modifications: K18 : Sumo 3 (K) Ions Score: 3 Expect: 2.7e+03

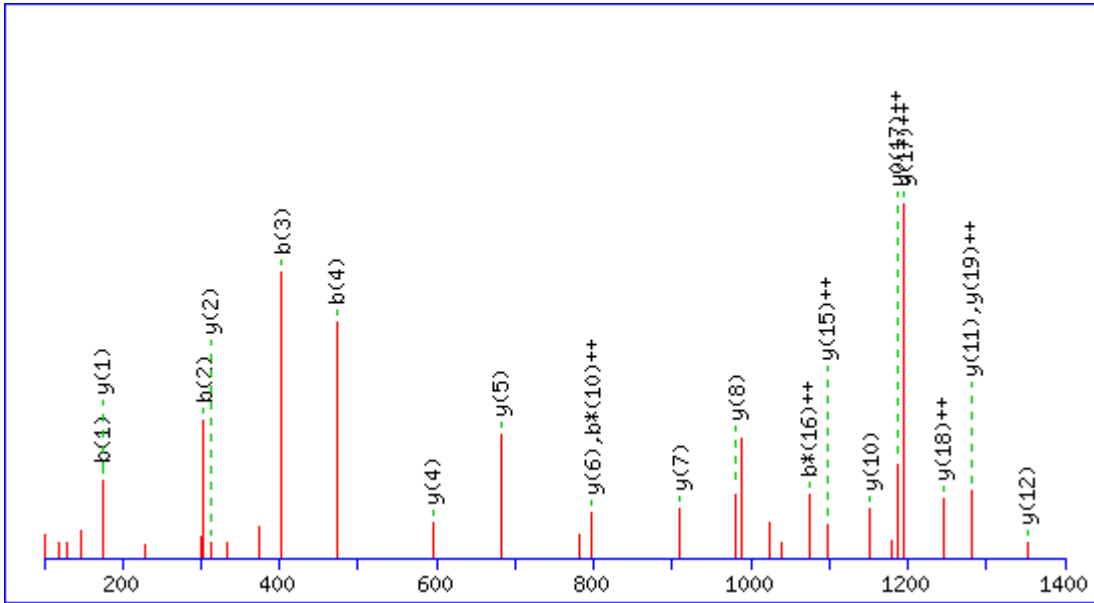
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0913 | 57.5493 | | | | | L | | | | | | | 24 |
| 2 | 201.1234 | 101.0653 | | | 183.1128 | 92.0600 | S | 3148.4818 | 1574.7445 | 3131.4552 | 1566.2313 | 3130.4712 | 1565.7392 | 23 |
| 3 | 314.2074 | 157.6074 | | | 296.1969 | 148.6021 | L | 3061.4497 | 1531.2285 | 3044.4232 | 1522.7152 | 3043.4392 | 1522.2232 | 22 |
| 4 | 411.2602 | 206.1337 | | | 393.2496 | 197.1285 | P | 2948.3657 | 1474.6865 | 2931.3391 | 1466.1732 | 2930.3551 | 1465.6812 | 21 |
| 5 | 540.3028 | 270.6550 | | | 522.2922 | 261.6498 | E | 2851.3129 | 1426.1601 | 2834.2864 | 1417.6468 | 2833.3024 | 1417.1548 | 20 |
| 6 | 627.3348 | 314.1710 | | | 609.3243 | 305.1658 | S | 2722.2703 | 1361.6388 | 2705.2438 | 1353.1255 | 2704.2598 | 1352.6335 | 19 |
| 7 | 728.3825 | 364.6949 | | | 710.3719 | 355.6896 | T | 2635.2383 | 1318.1228 | 2618.2117 | 1309.6095 | 2617.2277 | 1309.1175 | 18 |
| 8 | 857.4251 | 429.2162 | | | 839.4145 | 420.2109 | E | 2534.1906 | 1267.5989 | 2517.1641 | 1259.0857 | 2516.1801 | 1258.5937 | 17 |
| 9 | 944.4571 | 472.7322 | | | 926.4466 | 463.7269 | S | 2405.1480 | 1203.0777 | 2388.1215 | 1194.5644 | 2387.1375 | 1194.0724 | 16 |
| 10 | 1091.5255 | 546.2664 | | | 1073.5150 | 537.2611 | F | 2318.1160 | 1159.5616 | 2301.0894 | 1151.0484 | 2300.1054 | 1150.5564 | 15 |
| 11 | 1228.5844 | 614.7959 | | | 1210.5739 | 605.7906 | H | 2171.0476 | 1086.0274 | 2154.0210 | 1077.5142 | 2153.0370 | 1077.0221 | 14 |
| 12 | 1357.6270 | 679.3172 | | | 1339.6165 | 670.3119 | E | 2033.9887 | 1017.4980 | 2016.9621 | 1008.9847 | 2015.9781 | 1008.4927 | 13 |
| 13 | 1454.6798 | 727.8435 | | | 1436.6692 | 718.8383 | P | 1904.9461 | 952.9767 | 1887.9195 | 944.4634 | 1886.9355 | 943.9714 | 12 |
| 14 | 1541.7118 | 771.3596 | | | 1523.7013 | 762.3543 | S | 1807.8933 | 904.4503 | 1790.8668 | 895.9370 | 1789.8828 | 895.4450 | 11 |
| 15 | 1669.7704 | 835.3888 | 1652.7439 | 826.8756 | 1651.7598 | 826.3836 | Q | 1720.8613 | 860.9343 | 1703.8347 | 852.4210 | 1702.8507 | 851.9290 | 10 |
| 16 | 1798.8130 | 899.9101 | 1781.7865 | 891.3969 | 1780.8024 | 890.9049 | E | 1592.8027 | 796.9050 | 1575.7762 | 788.3917 | 1574.7921 | 787.8997 | 9 |
| 17 | 1911.8971 | 956.4522 | 1894.8705 | 947.9389 | 1893.8865 | 947.4469 | L | 1463.7601 | 732.3837 | 1446.7336 | 723.8704 | 1445.7496 | 723.3784 | 8 |
| 18 | 2497.1841 | 1249.0957 | 2480.1576 | 1240.5824 | 2479.1736 | 1240.0904 | K | 1350.6761 | 675.8417 | 1333.6495 | 667.3284 | 1332.6655 | 666.8364 | 7 |
| 19 | 2644.2526 | 1322.6299 | 2627.2260 | 1314.1166 | 2626.2420 | 1313.6246 | F | 765.3890 | 383.1981 | 748.3624 | 374.6849 | 747.3784 | 374.1928 | 6 |
| 20 | 2731.2846 | 1366.1459 | 2714.2580 | 1357.6327 | 2713.2740 | 1357.1406 | S | 618.3206 | 309.6639 | 601.2940 | 301.1506 | 600.3100 | 300.6586 | 5 |
| 21 | 2830.3530 | 1415.6801 | 2813.3264 | 1407.1669 | 2812.3424 | 1406.6749 | V | 531.2885 | 266.1479 | 514.2620 | 257.6346 | 513.2780 | 257.1426 | 4 |
| 22 | 2959.3956 | 1480.2014 | 2942.3690 | 1471.6882 | 2941.3850 | 1471.1961 | E | 432.2201 | 216.6137 | 415.1936 | 208.1004 | 414.2096 | 207.6084 | 3 |
| 23 | 3087.4542 | 1544.2307 | 3070.4276 | 1535.7174 | 3069.4436 | 1535.2254 | Q | 303.1775 | 152.0924 | 286.1510 | 143.5791 | | | 2 |
| 24 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 14

MS/MS Fragmentation of **MEVAVPVKQEA EGLALDSPWHR**

Found in **Q8N0Y2**, Zinc finger protein 444 OS=Homo sapiens GN=ZNF444 PE=1 SV=1



Monoisotopic mass of neutral peptide Mr(calc): 2960.4450

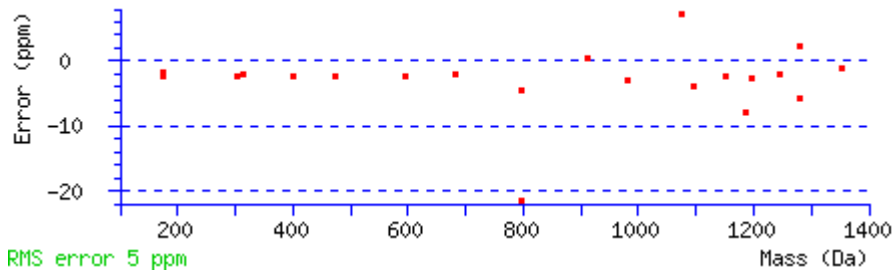
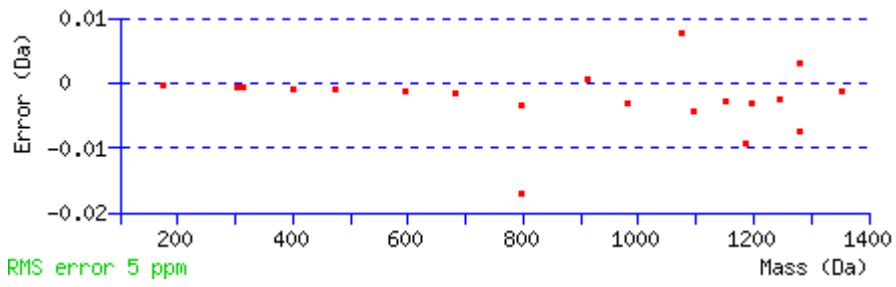
Variable modifications:

N-term : Acetyl (N-term)

K8 : Sumo 3 (K)

Ions Score: 61 Expect: 0.0026

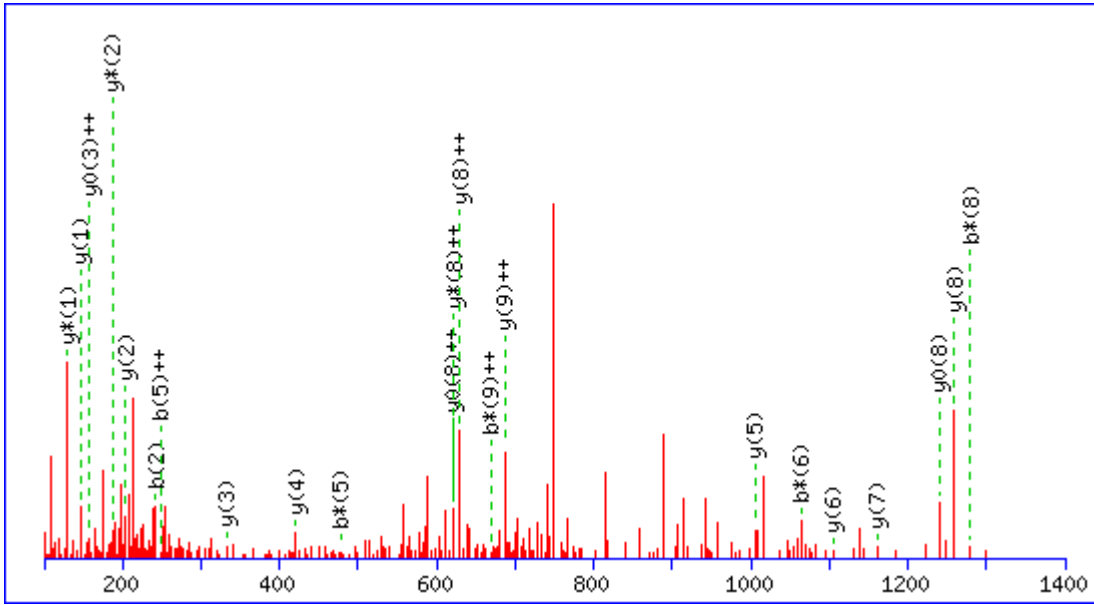
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ₀₊₊ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 174.0583 | 87.5328 | | | | | M | | | | | | | 22 |
| 2 | 303.1009 | 152.0541 | | | 285.0904 | 143.0488 | E | 2788.4013 | 1394.7043 | 2771.3747 | 1386.1910 | 2770.3907 | 1385.6990 | 21 |
| 3 | 402.1693 | 201.5883 | | | 384.1588 | 192.5830 | V | 2659.3587 | 1330.1830 | 2642.3321 | 1321.6697 | 2641.3481 | 1321.1777 | 20 |
| 4 | 473.2064 | 237.1069 | | | 455.1959 | 228.1016 | A | 2560.2903 | 1280.6488 | 2543.2637 | 1272.1355 | 2542.2797 | 1271.6435 | 19 |
| 5 | 572.2749 | 286.6411 | | | 554.2643 | 277.6358 | V | 2489.2532 | 1245.1302 | 2472.2266 | 1236.6169 | 2471.2426 | 1236.1249 | 18 |
| 6 | 669.3276 | 335.1675 | | | 651.3171 | 326.1622 | P | 2390.1847 | 1195.5960 | 2373.1582 | 1187.0827 | 2372.1742 | 1186.5907 | 17 |
| 7 | 768.3960 | 384.7017 | | | 750.3855 | 375.6964 | V | 2293.1320 | 1147.0696 | 2276.1054 | 1138.5564 | 2275.1214 | 1138.0643 | 16 |
| 8 | 1353.6831 | 677.3452 | 1336.6566 | 668.8319 | 1335.6725 | 668.3399 | K | 2194.0636 | 1097.5354 | 2177.0370 | 1089.0221 | 2176.0530 | 1088.5301 | 15 |
| 9 | 1481.7417 | 741.3745 | 1464.7151 | 732.8612 | 1463.7311 | 732.3692 | Q | 1608.7765 | 804.8919 | 1591.7499 | 796.3786 | 1590.7659 | 795.8866 | 14 |
| 10 | 1610.7843 | 805.8958 | 1593.7577 | 797.3825 | 1592.7737 | 796.8905 | E | 1480.7179 | 740.8626 | 1463.6914 | 732.3493 | 1462.7074 | 731.8573 | 13 |
| 11 | 1681.8214 | 841.4143 | 1664.7948 | 832.9011 | 1663.8108 | 832.4091 | A | 1351.6753 | 676.3413 | 1334.6488 | 667.8280 | 1333.6648 | 667.3360 | 12 |
| 12 | 1810.8640 | 905.9356 | 1793.8374 | 897.4224 | 1792.8534 | 896.9304 | E | 1280.6382 | 640.8227 | 1263.6117 | 632.3095 | 1262.6276 | 631.8175 | 11 |
| 13 | 1867.8855 | 934.4464 | 1850.8589 | 925.9331 | 1849.8749 | 925.4411 | G | 1151.5956 | 576.3014 | 1134.5691 | 567.7882 | 1133.5851 | 567.2962 | 10 |
| 14 | 1980.9695 | 990.9884 | 1963.9430 | 982.4751 | 1962.9590 | 981.9831 | L | 1094.5742 | 547.7907 | 1077.5476 | 539.2774 | 1076.5636 | 538.7854 | 9 |
| 15 | 2052.0066 | 1026.5070 | 2034.9801 | 1017.9937 | 2033.9961 | 1017.5017 | A | 981.4901 | 491.2487 | 964.4635 | 482.7354 | 963.4795 | 482.2434 | 8 |
| 16 | 2165.0907 | 1083.0490 | 2148.0641 | 1074.5357 | 2147.0801 | 1074.0437 | L | 910.4530 | 455.7301 | 893.4264 | 447.2169 | 892.4424 | 446.7248 | 7 |
| 17 | 2280.1176 | 1140.5625 | 2263.0911 | 1132.0492 | 2262.1071 | 1131.5572 | D | 797.3689 | 399.1881 | 780.3424 | 390.6748 | 779.3583 | 390.1828 | 6 |
| 18 | 2367.1497 | 1184.0785 | 2350.1231 | 1175.5652 | 2349.1391 | 1175.0732 | S | 682.3420 | 341.6746 | 665.3154 | 333.1613 | 664.3314 | 332.6693 | 5 |
| 19 | 2464.2024 | 1232.6049 | 2447.1759 | 1224.0916 | 2446.1919 | 1223.5996 | P | 595.3099 | 298.1586 | 578.2834 | 289.6453 | | | 4 |
| 20 | 2650.2817 | 1325.6445 | 2633.2552 | 1317.1312 | 2632.2712 | 1316.6392 | W | 498.2572 | 249.6322 | 481.2306 | 241.1190 | | | 3 |
| 21 | 2787.3407 | 1394.1740 | 2770.3141 | 1385.6607 | 2769.3301 | 1385.1687 | H | 312.1779 | 156.5926 | 295.1513 | 148.0793 | | | 2 |
| 22 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 15

MS/MS Fragmentation of **QLPGVKSE GK**

Found in **P09874**, Poly [ADP-ribose] polymerase 1 OS=Homo sapiens GN=PARP1 PE=1 SV=4



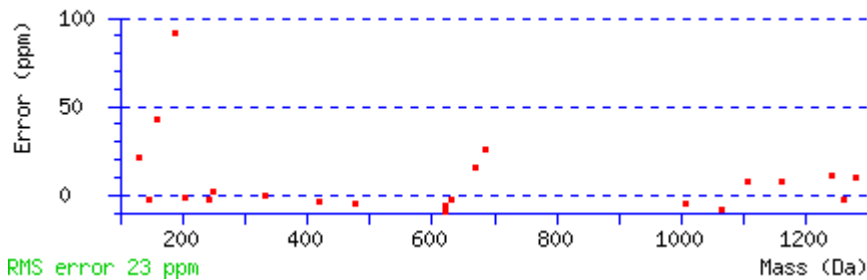
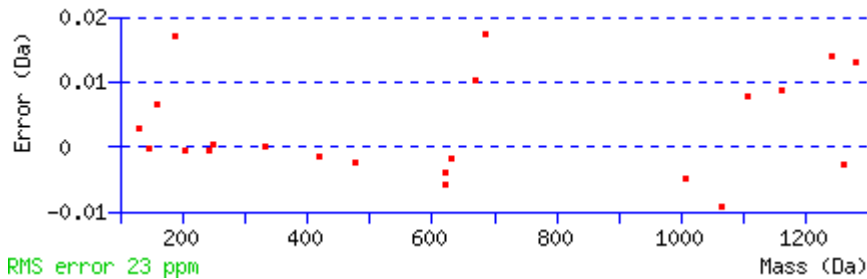
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1498.7740

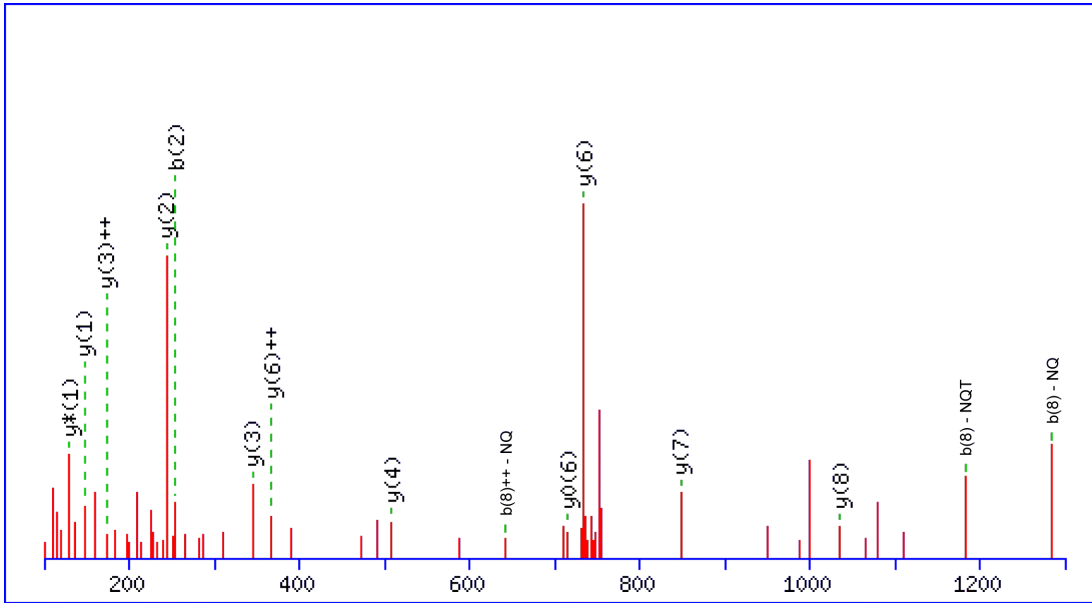
Variable modifications:

K6 : Sumo 3 (K)

Ions Score: 15 Expect: 26

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 129.0659 | 65.0366 | 112.0393 | 56.5233 | | | Q | | | | | | | 10 |
| 2 | 242.1499 | 121.5786 | 225.1234 | 113.0653 | | | L | 1371.7227 | 686.3650 | 1354.6961 | 677.8517 | 1353.7121 | 677.3597 | 9 |
| 3 | 339.2027 | 170.1050 | 322.1761 | 161.5917 | | | P | 1258.6386 | 629.8229 | 1241.6121 | 621.3097 | 1240.6280 | 620.8177 | 8 |
| 4 | 396.2241 | 198.6157 | 379.1976 | 190.1024 | | | G | 1161.5858 | 581.2966 | 1144.5593 | 572.7833 | 1143.5753 | 572.2913 | 7 |
| 5 | 495.2926 | 248.1499 | 478.2660 | 239.6366 | | | V | 1104.5644 | 552.7858 | 1087.5378 | 544.2726 | 1086.5538 | 543.7805 | 6 |
| 6 | 1080.5796 | 540.7935 | 1063.5531 | 532.2802 | | | K | 1005.4960 | 503.2516 | 988.4694 | 494.7383 | 987.4854 | 494.2463 | 5 |
| 7 | 1167.6117 | 584.3095 | 1150.5851 | 575.7962 | 1149.6011 | 575.3042 | S | 420.2089 | 210.6081 | 403.1823 | 202.0948 | 402.1983 | 201.6028 | 4 |
| 8 | 1296.6543 | 648.8308 | 1279.6277 | 640.3175 | 1278.6437 | 639.8255 | E | 333.1769 | 167.0921 | 316.1503 | 158.5788 | 315.1663 | 158.0868 | 3 |
| 9 | 1353.6757 | 677.3415 | 1336.6492 | 668.8282 | 1335.6652 | 668.3362 | G | 204.1343 | 102.5708 | 187.1077 | 94.0575 | | | 2 |
| 10 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



MS/MS Fragmentation of **RPKEEWDPEYTPK**Found in **Q9NYF8**, Bcl-2-associated transcription factor 1 OS=Homo sapiens GN=BCLAF1 PE=1 SV=2

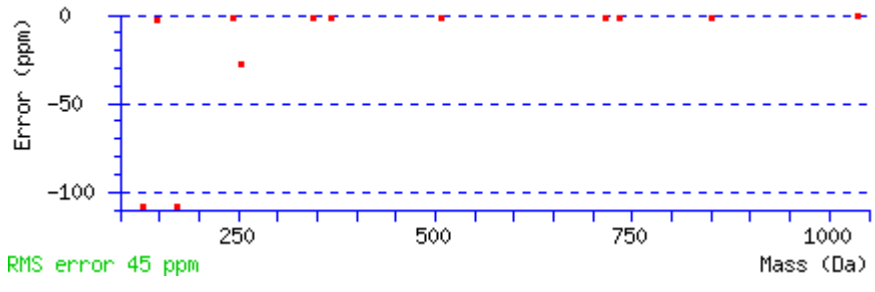
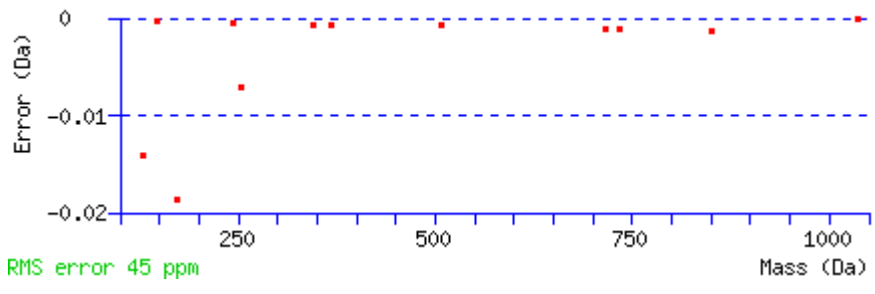
Monoisotopic mass of neutral peptide Mr(calc): 2260.0396

Variable modifications:

K3 : Sumo 3 (K)

Ions Score: 20 Expect: 38

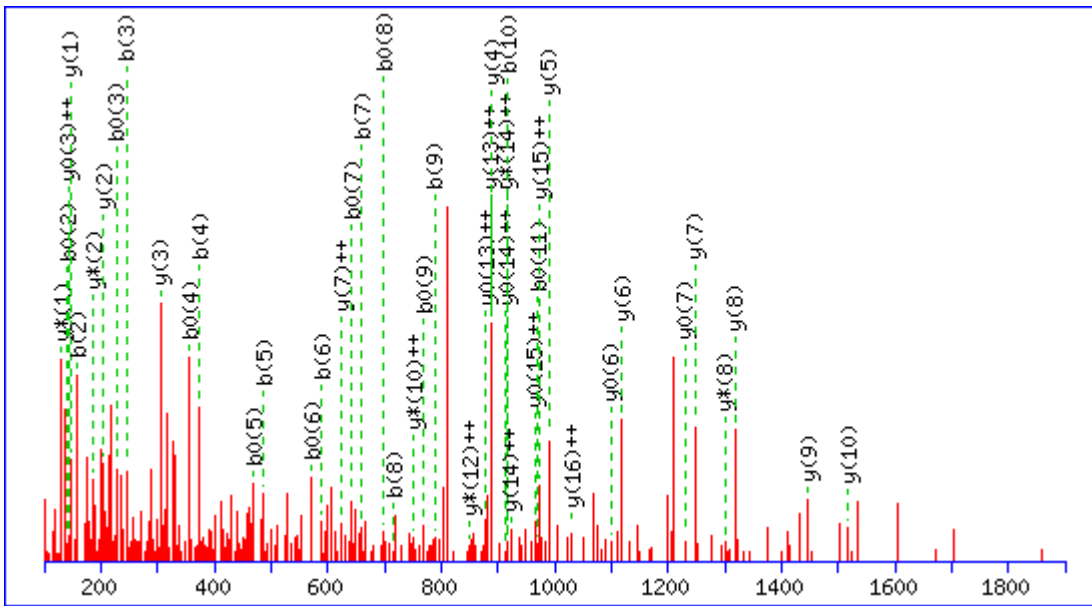
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 157.1084 | 79.0578 | 140.0818 | 70.5446 | | | R | | | | | | | 14 |
| 2 | 254.1612 | 127.5842 | 237.1346 | 119.0709 | | | P | 2104.9458 | 1052.9765 | 2087.9193 | 1044.4633 | 2086.9352 | 1043.9713 | 13 |
| 3 | 839.4482 | 420.2278 | 822.4217 | 411.7145 | | | K | 2007.8930 | 1004.4502 | 1990.8665 | 995.9369 | 1989.8825 | 995.4449 | 12 |
| 4 | 968.4908 | 484.7490 | 951.4643 | 476.2358 | 950.4803 | 475.7438 | E | 1422.6060 | 711.8066 | 1405.5794 | 703.2933 | 1404.5954 | 702.8013 | 11 |
| 5 | 1097.5334 | 549.2703 | 1080.5069 | 540.7571 | 1079.5228 | 540.2651 | E | 1293.5634 | 647.2853 | 1276.5368 | 638.7721 | 1275.5528 | 638.2800 | 10 |
| 6 | 1226.5760 | 613.7916 | 1209.5495 | 605.2784 | 1208.5654 | 604.7864 | E | 1164.5208 | 582.7640 | 1147.4942 | 574.2508 | 1146.5102 | 573.7587 | 9 |
| 7 | 1412.6553 | 706.8313 | 1395.6288 | 698.3180 | 1394.6448 | 697.8260 | W | 1035.4782 | 518.2427 | 1018.4516 | 509.7295 | 1017.4676 | 509.2375 | 8 |
| 8 | 1527.6823 | 764.3448 | 1510.6557 | 755.8315 | 1509.6717 | 755.3395 | D | 849.3989 | 425.2031 | 832.3723 | 416.6898 | 831.3883 | 416.1978 | 7 |
| 9 | 1624.7350 | 812.8712 | 1607.7085 | 804.3579 | 1606.7245 | 803.8659 | P | 734.3719 | 367.6896 | 717.3454 | 359.1763 | 716.3614 | 358.6843 | 6 |
| 10 | 1753.7776 | 877.3924 | 1736.7511 | 868.8792 | 1735.7671 | 868.3872 | E | 637.3192 | 319.1632 | 620.2926 | 310.6499 | 619.3086 | 310.1579 | 5 |
| 11 | 1916.8409 | 958.9241 | 1899.8144 | 950.4108 | 1898.8304 | 949.9188 | Y | 508.2766 | 254.6419 | 491.2500 | 246.1287 | 490.2660 | 245.6366 | 4 |
| 12 | 2017.8886 | 1009.4480 | 2000.8621 | 1000.9347 | 1999.8781 | 1000.4427 | T | 345.2132 | 173.1103 | 328.1867 | 164.5970 | 327.2027 | 164.1050 | 3 |
| 13 | 2114.9414 | 1057.9743 | 2097.9148 | 1049.4611 | 2096.9308 | 1048.9690 | P | 244.1656 | 122.5864 | 227.1390 | 114.0731 | | | 2 |
| 14 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 17

MS/MS Fragmentation of **SASELTAGAEAEAEVKTGK**

Found in **Q9H0U9**, Testis-specific Y-encoded-like protein 1 OS=Homo sapiens GN=TSPYL1 PE=1 SV=3



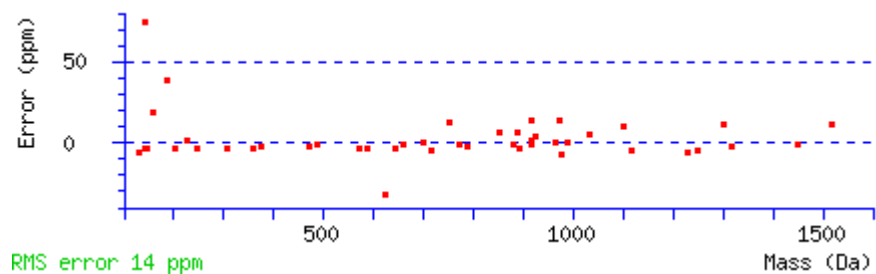
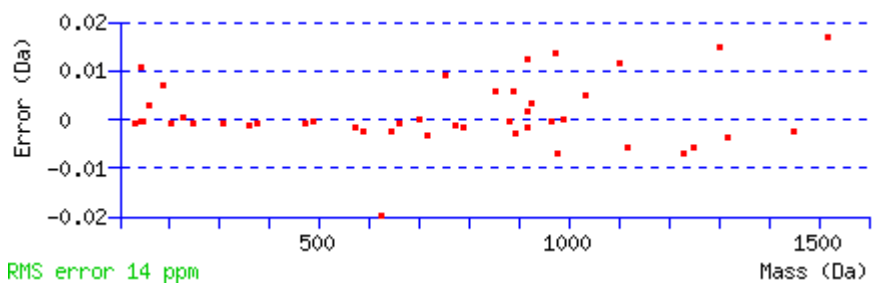
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2434.1459

Variable modifications:

K17 : Sumo 3 (K)

Ions Score: 38 Expect: 0.57

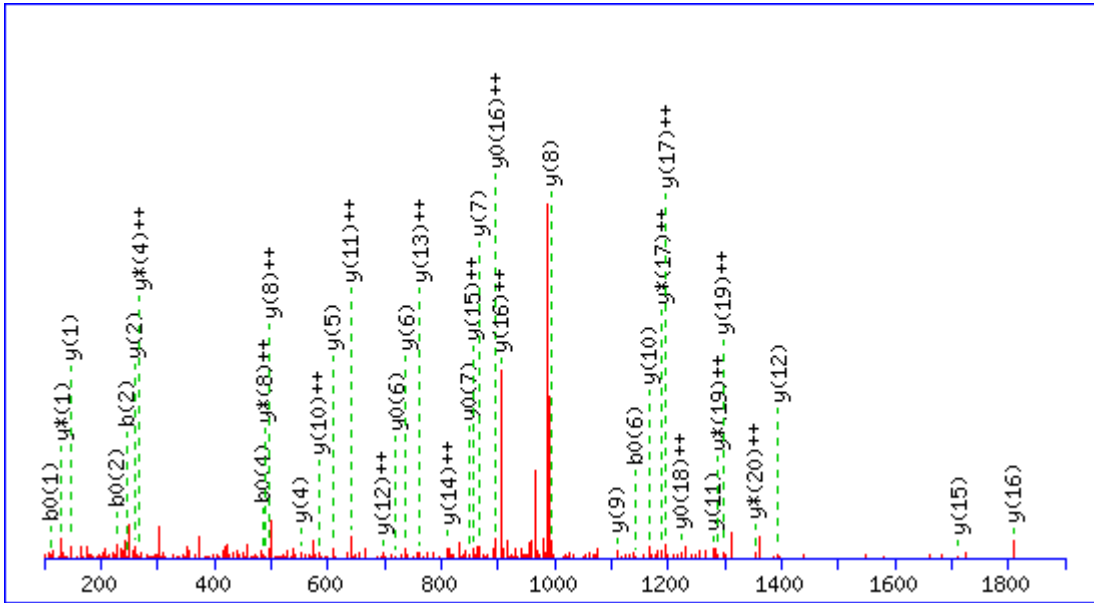
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 88.0393 | 44.5233 | | | 70.0287 | 35.5180 | S | | | | | | | 20 |
| 2 | 159.0764 | 80.0418 | | | 141.0659 | 71.0366 | A | 2348.1212 | 1174.5642 | 2331.0947 | 1166.0510 | 2330.1106 | 1165.5590 | 19 |
| 3 | 246.1084 | 123.5579 | | | 228.0979 | 114.5526 | S | 2277.0841 | 1139.0457 | 2260.0575 | 1130.5324 | 2259.0735 | 1130.0404 | 18 |
| 4 | 375.1510 | 188.0792 | | | 357.1405 | 179.0739 | E | 2190.0521 | 1095.5297 | 2173.0255 | 1087.0164 | 2172.0415 | 1086.5244 | 17 |
| 5 | 488.2351 | 244.6212 | | | 470.2245 | 235.6159 | L | 2061.0095 | 1031.0084 | 2043.9829 | 1022.4951 | 2042.9989 | 1022.0031 | 16 |
| 6 | 589.2828 | 295.1450 | | | 571.2722 | 286.1397 | T | 1947.9254 | 974.4663 | 1930.8989 | 965.9531 | 1929.9148 | 965.4611 | 15 |
| 7 | 660.3199 | 330.6636 | | | 642.3093 | 321.6583 | A | 1846.8777 | 923.9425 | 1829.8512 | 915.4292 | 1828.8672 | 914.9372 | 14 |
| 8 | 717.3414 | 359.1743 | | | 699.3308 | 350.1690 | G | 1775.8406 | 888.4239 | 1758.8141 | 879.9107 | 1757.8300 | 879.4187 | 13 |
| 9 | 788.3785 | 394.6929 | | | 770.3679 | 385.6876 | A | 1718.8191 | 859.9132 | 1701.7926 | 851.3999 | 1700.8086 | 850.9079 | 12 |
| 10 | 917.4211 | 459.2142 | | | 899.4105 | 450.2089 | E | 1647.7820 | 824.3947 | 1630.7555 | 815.8814 | 1629.7715 | 815.3894 | 11 |
| 11 | 988.4582 | 494.7327 | | | 970.4476 | 485.7274 | A | 1518.7394 | 759.8734 | 1501.7129 | 751.3601 | 1500.7289 | 750.8681 | 10 |
| 12 | 1117.5008 | 559.2540 | | | 1099.4902 | 550.2487 | E | 1447.7023 | 724.3548 | 1430.6758 | 715.8415 | 1429.6918 | 715.3495 | 9 |
| 13 | 1188.5379 | 594.7726 | | | 1170.5273 | 585.7673 | A | 1318.6597 | 659.8335 | 1301.6332 | 651.3202 | 1300.6492 | 650.8282 | 8 |
| 14 | 1317.5805 | 659.2939 | | | 1299.5699 | 650.2886 | E | 1247.6226 | 624.3149 | 1230.5961 | 615.8017 | 1229.6121 | 615.3097 | 7 |
| 15 | 1446.6231 | 723.8152 | | | 1428.6125 | 714.8099 | E | 1118.5800 | 559.7937 | 1101.5535 | 551.2804 | 1100.5695 | 550.7884 | 6 |
| 16 | 1545.6915 | 773.3494 | | | 1527.6809 | 764.3441 | V | 989.5374 | 495.2724 | 972.5109 | 486.7591 | 971.5269 | 486.2671 | 5 |
| 17 | 2130.9786 | 1065.9929 | 2113.9520 | 1057.4796 | 2112.9680 | 1056.9876 | K | 890.4690 | 445.7381 | 873.4425 | 437.2249 | 872.4585 | 436.7329 | 4 |
| 18 | 2232.0262 | 1116.5168 | 2214.9997 | 1108.0035 | 2214.0157 | 1107.5115 | T | 305.1819 | 153.0946 | 288.1554 | 144.5813 | 287.1714 | 144.0893 | 3 |
| 19 | 2289.0477 | 1145.0275 | 2272.0212 | 1136.5142 | 2271.0371 | 1136.0222 | G | 204.1343 | 102.5708 | 187.1077 | 94.0575 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 18

MS/MS Fragmentation of **SDQEAKPSTEDLGDKKEGEYIK**

Found in **P63165**, Small ubiquitin-related modifier 1 OS=Homo sapiens GN=SUMO1 PE=1 SV=1



Monoisotopic mass of neutral peptide Mr(calc): 2966.3628

Variable modifications:

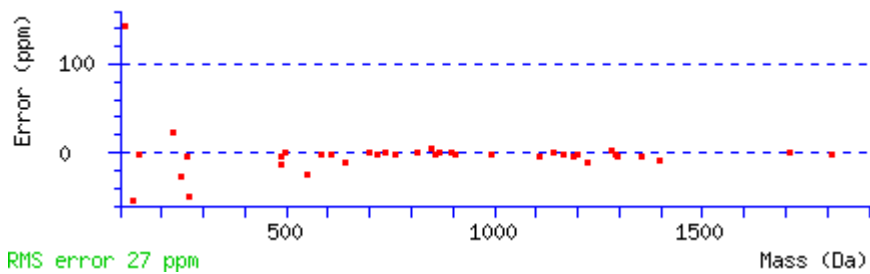
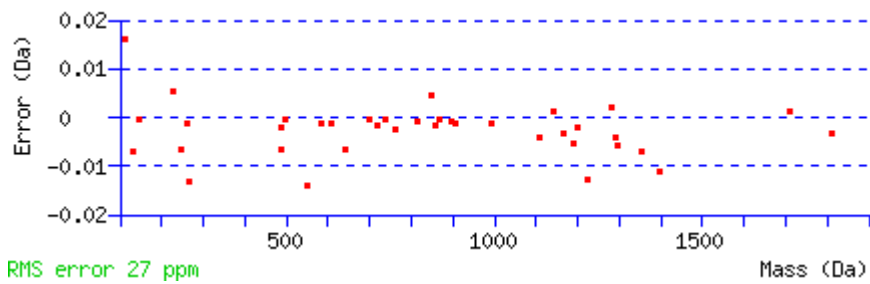
N-term : Acetyl (N-term)

Q3 : Deamidated (NQ)

K6 : Sumo 3 (K)

Ions Score: 22 Expect: 35

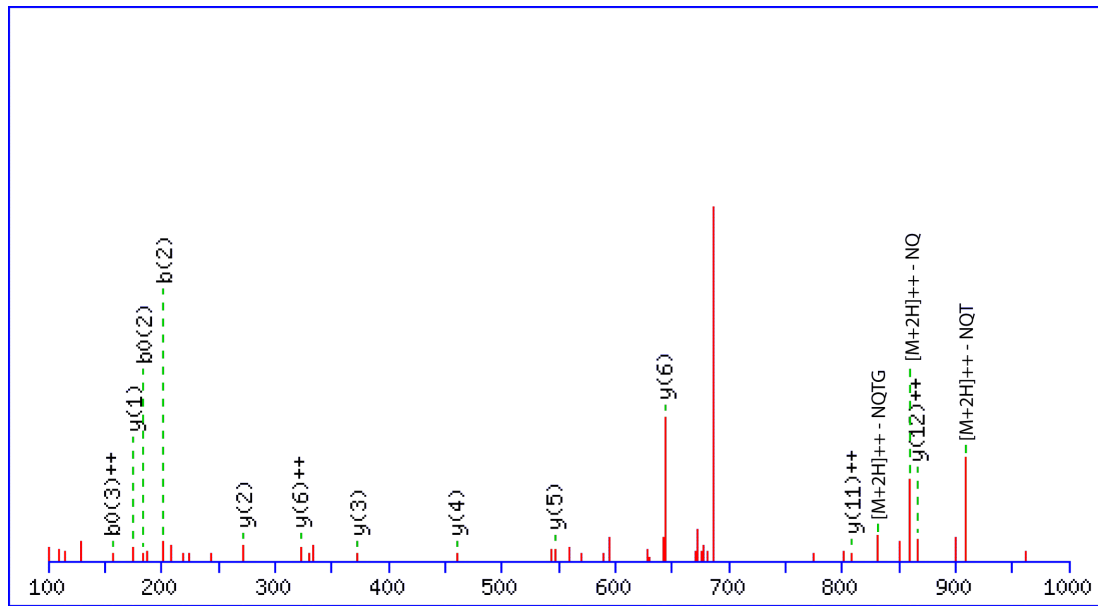
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 130.0499 | 65.5286 | | | 112.0393 | 56.5233 | S | | | | | | | 22 |
| 2 | 245.0768 | 123.0420 | | | 227.0662 | 114.0368 | D | 2838.3276 | 1419.6674 | 2821.3010 | 1411.1541 | 2820.3170 | 1410.6621 | 21 |
| 3 | 374.1194 | 187.5633 | 357.0929 | 179.0501 | 356.1088 | 178.5581 | Q | 2723.3006 | 1362.1540 | 2706.2741 | 1353.6407 | 2705.2901 | 1353.1487 | 20 |
| 4 | 503.1620 | 252.0846 | 486.1354 | 243.5714 | 485.1514 | 243.0794 | E | 2594.2580 | 1297.6327 | 2577.2315 | 1289.1194 | 2576.2475 | 1288.6274 | 19 |
| 5 | 574.1991 | 287.6032 | 557.1726 | 279.0899 | 556.1885 | 278.5979 | A | 2465.2154 | 1233.1114 | 2448.1889 | 1224.5981 | 2447.2049 | 1224.1061 | 18 |
| 6 | 1159.4862 | 580.2467 | 1142.4596 | 571.7335 | 1141.4756 | 571.2414 | K | 2394.1783 | 1197.5928 | 2377.1518 | 1189.0795 | 2376.1678 | 1188.5875 | 17 |
| 7 | 1256.5390 | 628.7731 | 1239.5124 | 620.2598 | 1238.5284 | 619.7678 | P | 1808.8913 | 904.9493 | 1791.8647 | 896.4360 | 1790.8807 | 895.9440 | 16 |
| 8 | 1343.5710 | 672.2891 | 1326.5444 | 663.7759 | 1325.5604 | 663.2838 | S | 1711.8385 | 856.4229 | 1694.8119 | 847.9096 | 1693.8279 | 847.4176 | 15 |
| 9 | 1444.6187 | 722.8130 | 1427.5921 | 714.2997 | 1426.6081 | 713.8077 | T | 1624.8065 | 812.9069 | 1607.7799 | 804.3936 | 1606.7959 | 803.9016 | 14 |
| 10 | 1573.6613 | 787.3343 | 1556.6347 | 778.8210 | 1555.6507 | 778.3290 | E | 1523.7588 | 762.3830 | 1506.7322 | 753.8698 | 1505.7482 | 753.3777 | 13 |
| 11 | 1688.6882 | 844.8477 | 1671.6616 | 836.3345 | 1670.6776 | 835.8425 | D | 1394.7162 | 697.8617 | 1377.6896 | 689.3485 | 1376.7056 | 688.8564 | 12 |
| 12 | 1801.7723 | 901.3898 | 1784.7457 | 892.8765 | 1783.7617 | 892.3845 | L | 1279.6892 | 640.3483 | 1262.6627 | 631.8350 | 1261.6787 | 631.3430 | 11 |
| 13 | 1858.7937 | 929.9005 | 1841.7672 | 921.3872 | 1840.7832 | 920.8952 | G | 1166.6052 | 583.8062 | 1149.5786 | 575.2930 | 1148.5946 | 574.8009 | 10 |
| 14 | 1973.8207 | 987.4140 | 1956.7941 | 978.9007 | 1955.8101 | 978.4087 | D | 1109.5837 | 555.2955 | 1092.5572 | 546.7822 | 1091.5732 | 546.2902 | 9 |
| 15 | 2101.9156 | 1051.4615 | 2084.8891 | 1042.9482 | 2083.9051 | 1042.4562 | K | 994.5568 | 497.7820 | 977.5302 | 489.2688 | 976.5462 | 488.7767 | 8 |
| 16 | 2230.0106 | 1115.5089 | 2212.9840 | 1106.9957 | 2212.0000 | 1106.5037 | K | 866.4618 | 433.7345 | 849.4353 | 425.2213 | 848.4512 | 424.7293 | 7 |
| 17 | 2359.0532 | 1180.0302 | 2342.0266 | 1171.5170 | 2341.0426 | 1171.0249 | E | 738.3668 | 369.6871 | 721.3403 | 361.1738 | 720.3563 | 360.6818 | 6 |
| 18 | 2416.0746 | 1208.5410 | 2399.0481 | 1200.0277 | 2398.0641 | 1199.5357 | G | 609.3243 | 305.1658 | 592.2977 | 296.6525 | 591.3137 | 296.1605 | 5 |
| 19 | 2545.1172 | 1273.0623 | 2528.0907 | 1264.5490 | 2527.1067 | 1264.0570 | E | 552.3028 | 276.6550 | 535.2762 | 268.1418 | 534.2922 | 267.6498 | 4 |
| 20 | 2708.1806 | 1354.5939 | 2691.1540 | 1346.0806 | 2690.1700 | 1345.5886 | Y | 423.2602 | 212.1337 | 406.2336 | 203.6205 | | | 3 |
| 21 | 2821.2646 | 1411.1360 | 2804.2381 | 1402.6227 | 2803.2541 | 1402.1307 | I | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 22 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 19

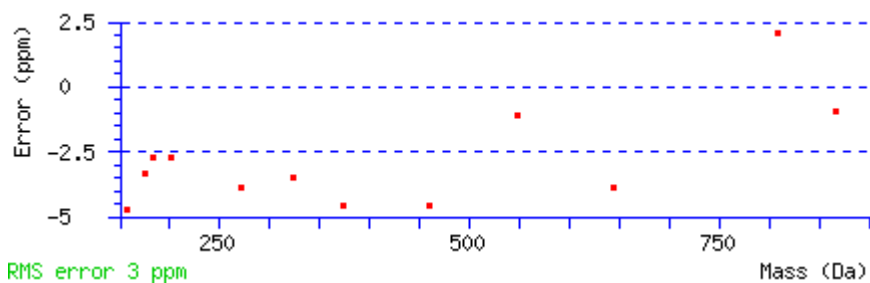
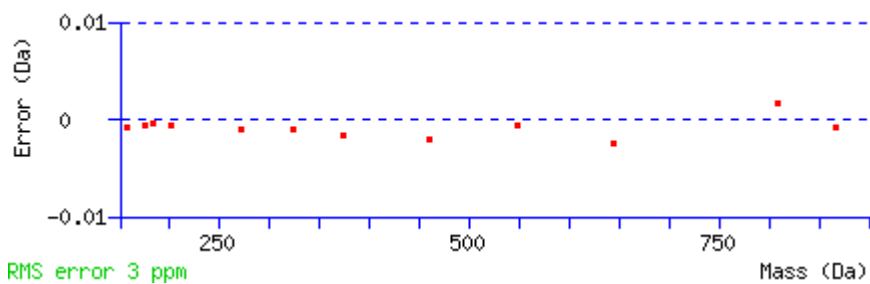
MS/MS Fragmentation of **SNQNGKDSKPSSTPR**

Found in **P06748**, Nucleophosmin OS=Homo sapiens GN=NPM1 PE=1 SV=2



Monoisotopic mass of neutral peptide Mr(calc): 2060.9359 Variable modifications: Q3 : Deamidated (NQ) N4 : Deamidated (NQ) K9 : Sumo 3 (K) Ions Score: 14 Expect: 1.1e+02

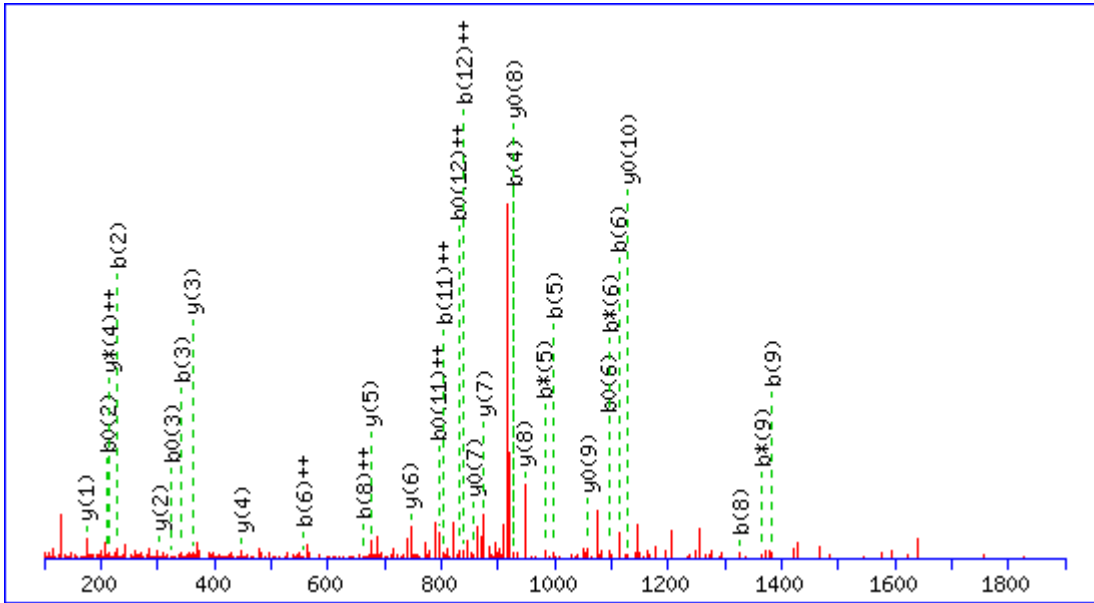
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------------|-----------------|----------------|------------------|-----------------|------------------|------|-----------------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 88.0393 | 44.5233 | | | 70.0287 | 35.5180 | S | | | | | | | 15 |
| 2 | 202.0822 | 101.5448 | 185.0557 | 93.0315 | 184.0717 | 92.5395 | N | 1974.9112 | 987.9592 | 1957.8846 | 979.4459 | 1956.9006 | 978.9539 | 14 |
| 3 | 331.1248 | 166.0661 | 314.0983 | 157.5528 | 313.1143 | 157.0608 | Q | 1860.8682 | 930.9378 | 1843.8417 | 922.4245 | 1842.8577 | 921.9325 | 13 |
| 4 | 446.1518 | 223.5795 | 429.1252 | 215.0662 | 428.1412 | 214.5742 | N | 1731.8256 | 866.4165 | 1714.7991 | 857.9032 | 1713.8151 | 857.4112 | 12 |
| 5 | 503.1732 | 252.0903 | 486.1467 | 243.5770 | 485.1627 | 243.0850 | G | 1616.7987 | 808.9030 | 1599.7721 | 800.3897 | 1598.7881 | 799.8977 | 11 |
| 6 | 631.2682 | 316.1377 | 614.2416 | 307.6245 | 613.2576 | 307.1325 | K | 1559.7772 | 780.3922 | 1542.7507 | 771.8790 | 1541.7667 | 771.3870 | 10 |
| 7 | 746.2951 | 373.6512 | 729.2686 | 365.1379 | 728.2846 | 364.6459 | D | 1431.6823 | 716.3448 | 1414.6557 | 707.8315 | 1413.6717 | 707.3395 | 9 |
| 8 | 833.3272 | 417.1672 | 816.3006 | 408.6539 | 815.3166 | 408.1619 | S | 1316.6553 | 658.8313 | 1299.6288 | 650.3180 | 1298.6448 | 649.8260 | 8 |
| 9 | 1418.6142 | 709.8108 | 1401.5877 | 701.2975 | 1400.6037 | 700.8055 | K | 1229.6233 | 615.3153 | 1212.5967 | 606.8020 | 1211.6127 | 606.3100 | 7 |
| 10 | 1515.6670 | 758.3371 | 1498.6405 | 749.8239 | 1497.6564 | 749.3319 | P | 644.3362 | 322.6717 | 627.3097 | 314.1585 | 626.3257 | 313.6665 | 6 |
| 11 | 1602.6990 | 801.8532 | 1585.6725 | 793.3399 | 1584.6885 | 792.8479 | S | 547.2835 | 274.1454 | 530.2569 | 265.6321 | 529.2729 | 265.1401 | 5 |
| 12 | 1689.7311 | 845.3692 | 1672.7045 | 836.8559 | 1671.7205 | 836.3639 | S | 460.2514 | 230.6293 | 443.2249 | 222.1161 | 442.2409 | 221.6241 | 4 |
| 13 | 1790.7787 | 895.8930 | 1773.7522 | 887.3797 | 1772.7682 | 886.8877 | T | 373.2194 | 187.1133 | 356.1928 | 178.6001 | 355.2088 | 178.1081 | 3 |
| 14 | 1887.8315 | 944.4194 | 1870.8050 | 935.9061 | 1869.8209 | 935.4141 | P | 272.1717 | 136.5895 | 255.1452 | 128.0762 | | | 2 |
| 15 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 20

MS/MS Fragmentation of **TKIKADPDGPEAQAEACSGER**

Found in **Q9NX24**, H/AcA ribonucleoprotein complex subunit 2 OS=Homo sapiens GN=NHP2 PE=1 SV=1



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2755.2355

Variable modifications:

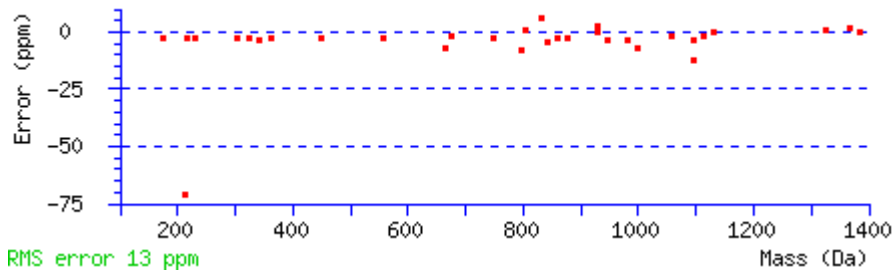
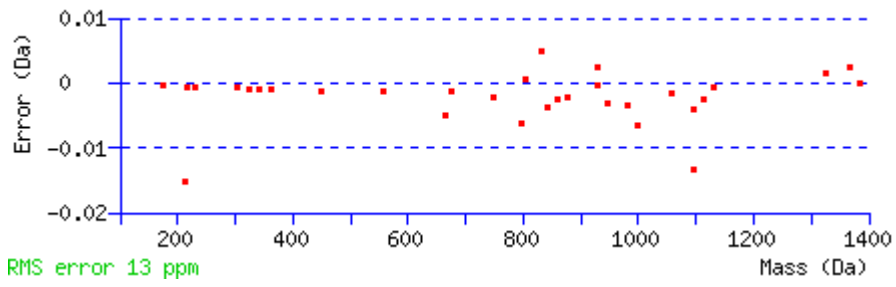
K4 : Sumo 3 (K)

Q13 : Deamidated (NQ)

C17 : Nethylmaleimide (C)

Ions Score: 6 Expect: 1.5e+03

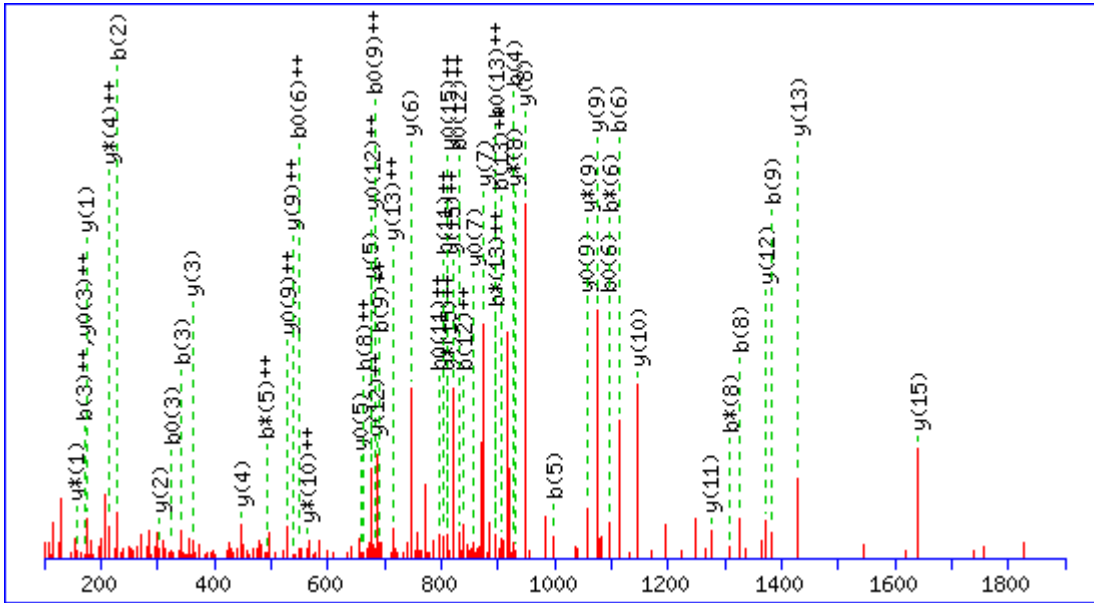
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 102.0550 | 51.5311 | | | 84.0444 | 42.5258 | T | | | | | | | 21 |
| 2 | 230.1499 | 115.5786 | 213.1234 | 107.0653 | 212.1394 | 106.5733 | K | 2655.1951 | 1328.1012 | 2638.1686 | 1319.5879 | 2637.1846 | 1319.0959 | 20 |
| 3 | 343.2340 | 172.1206 | 326.2074 | 163.6074 | 325.2234 | 163.1153 | I | 2527.1002 | 1264.0537 | 2510.0736 | 1255.5404 | 2509.0896 | 1255.0484 | 19 |
| 4 | 928.5211 | 464.7642 | 911.4945 | 456.2509 | 910.5105 | 455.7589 | K | 2414.0161 | 1207.5117 | 2396.9895 | 1198.9984 | 2396.0055 | 1198.5064 | 18 |
| 5 | 999.5582 | 500.2827 | 982.5316 | 491.7694 | 981.5476 | 491.2774 | A | 1828.7290 | 914.8681 | 1811.7025 | 906.3549 | 1810.7185 | 905.8629 | 17 |
| 6 | 1114.5851 | 557.7962 | 1097.5586 | 549.2829 | 1096.5745 | 548.7909 | D | 1757.6919 | 879.3496 | 1740.6654 | 870.8363 | 1739.6813 | 870.3443 | 16 |
| 7 | 1211.6379 | 606.3226 | 1194.6113 | 597.8093 | 1193.6273 | 597.3173 | P | 1642.6650 | 821.8361 | 1625.6384 | 813.3228 | 1624.6544 | 812.8308 | 15 |
| 8 | 1326.6648 | 663.8360 | 1309.6383 | 655.3228 | 1308.6543 | 654.8308 | D | 1545.6122 | 773.3097 | 1528.5856 | 764.7965 | 1527.6016 | 764.3045 | 14 |
| 9 | 1383.6863 | 692.3468 | 1366.6597 | 683.8335 | 1365.6757 | 683.3415 | G | 1430.5853 | 715.7963 | 1413.5587 | 707.2830 | 1412.5747 | 706.7910 | 13 |
| 10 | 1480.7390 | 740.8732 | 1463.7125 | 732.3599 | 1462.7285 | 731.8679 | P | 1373.5638 | 687.2855 | 1356.5372 | 678.7723 | 1355.5532 | 678.2802 | 12 |
| 11 | 1609.7816 | 805.3945 | 1592.7551 | 796.8812 | 1591.7711 | 796.3892 | E | 1276.5110 | 638.7591 | 1259.4845 | 630.2459 | 1258.5005 | 629.7539 | 11 |
| 12 | 1680.8188 | 840.9130 | 1663.7922 | 832.3997 | 1662.8082 | 831.9077 | A | 1147.4684 | 574.2379 | 1130.4419 | 565.7246 | 1129.4579 | 565.2326 | 10 |
| 13 | 1809.8613 | 905.4343 | 1792.8348 | 896.9210 | 1791.8508 | 896.4290 | Q | 1076.4313 | 538.7193 | 1059.4048 | 530.2060 | 1058.4208 | 529.7140 | 9 |
| 14 | 1880.8985 | 940.9529 | 1863.8719 | 932.4396 | 1862.8879 | 931.9476 | A | 947.3887 | 474.1980 | 930.3622 | 465.6847 | 929.3782 | 465.1927 | 8 |
| 15 | 2009.9411 | 1005.4742 | 1992.9145 | 996.9609 | 1991.9305 | 996.4689 | E | 876.3516 | 438.6794 | 859.3251 | 430.1662 | 858.3410 | 429.6742 | 7 |
| 16 | 2080.9782 | 1040.9927 | 2063.9516 | 1032.4794 | 2062.9676 | 1031.9874 | A | 747.3090 | 374.1581 | 730.2825 | 365.6449 | 729.2985 | 365.1529 | 6 |
| 17 | 2309.0350 | 1155.0212 | 2292.0085 | 1146.5079 | 2291.0245 | 1146.0159 | C | 676.2719 | 338.6396 | 659.2454 | 330.1263 | 658.2613 | 329.6343 | 5 |
| 18 | 2396.0671 | 1198.5372 | 2379.0405 | 1190.0239 | 2378.0565 | 1189.5319 | S | 448.2150 | 224.6112 | 431.1885 | 216.0979 | 430.2045 | 215.6059 | 4 |
| 19 | 2453.0885 | 1227.0479 | 2436.0620 | 1218.5346 | 2435.0780 | 1218.0426 | G | 361.1830 | 181.0951 | 344.1565 | 172.5819 | 343.1724 | 172.0899 | 3 |
| 20 | 2582.1311 | 1291.5692 | 2565.1046 | 1283.0559 | 2564.1206 | 1282.5639 | E | 304.1615 | 152.5844 | 287.1350 | 144.0711 | 286.1510 | 143.5791 | 2 |
| 21 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 21

MS/MS Fragmentation of **TKIKADPDGPEAQAEACSGER**

Found in **Q9NX24**, H/A CA ribonucleoprotein complex subunit 2 OS=Homo sapiens GN=NHP2 PE=1 SV=1



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2754.2515

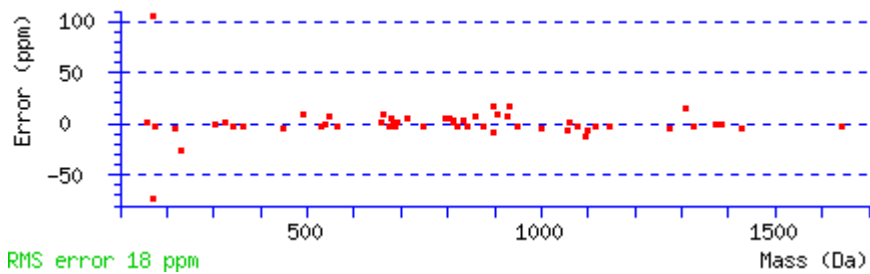
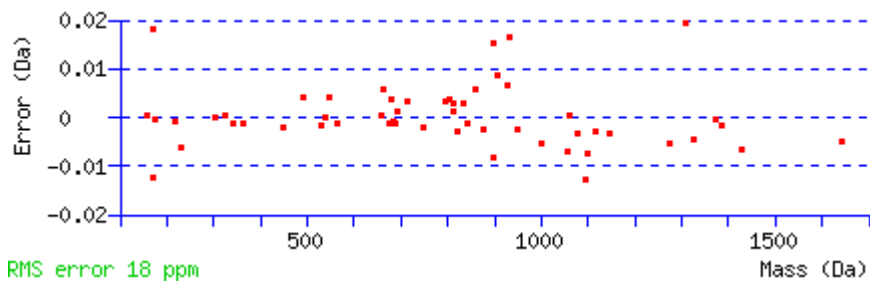
Variable modifications:

K4 : Sumo 3 (K)

C17 : Nethylmaleimide (C)

Ions Score: 77 Expect: 0.00011

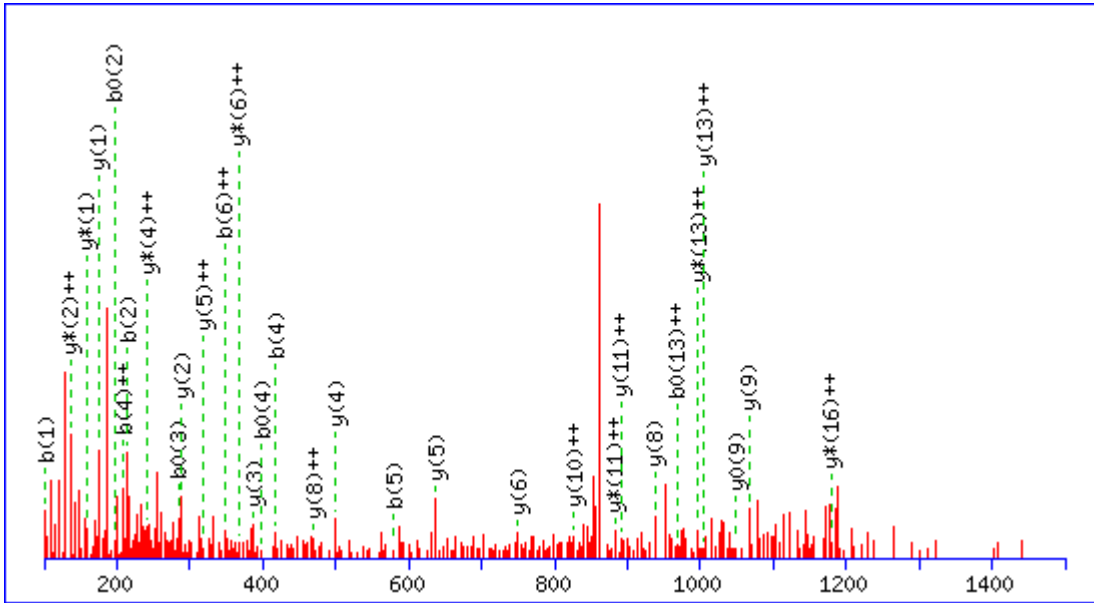
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 102.0550 | 51.5311 | | | 84.0444 | 42.5258 | T | | | | | | | 21 |
| 2 | 230.1499 | 115.5786 | 213.1234 | 107.0653 | 212.1394 | 106.5733 | K | 2654.2111 | 1327.6092 | 2637.1846 | 1319.0959 | 2636.2005 | 1318.6039 | 20 |
| 3 | 343.2340 | 172.1206 | 326.2074 | 163.6074 | 325.2234 | 163.1153 | I | 2526.1161 | 1263.5617 | 2509.0896 | 1255.0484 | 2508.1056 | 1254.5564 | 19 |
| 4 | 928.5211 | 464.7642 | 911.4945 | 456.2509 | 910.5105 | 455.7589 | K | 2413.0321 | 1207.0197 | 2396.0055 | 1198.5064 | 2395.0215 | 1198.0144 | 18 |
| 5 | 999.5582 | 500.2827 | 982.5316 | 491.7694 | 981.5476 | 491.2774 | A | 1827.7450 | 914.3761 | 1810.7185 | 905.8629 | 1809.7344 | 905.3709 | 17 |
| 6 | 1114.5851 | 557.7962 | 1097.5586 | 549.2829 | 1096.5745 | 548.7909 | D | 1756.7079 | 878.8576 | 1739.6813 | 870.3443 | 1738.6973 | 869.8523 | 16 |
| 7 | 1211.6379 | 606.3226 | 1194.6113 | 597.8093 | 1193.6273 | 597.3173 | P | 1641.6809 | 821.3441 | 1624.6544 | 812.8308 | 1623.6704 | 812.3388 | 15 |
| 8 | 1326.6648 | 663.8360 | 1309.6383 | 655.3228 | 1308.6543 | 654.8308 | D | 1544.6282 | 772.8177 | 1527.6016 | 764.3045 | 1526.6176 | 763.8124 | 14 |
| 9 | 1383.6863 | 692.3468 | 1366.6597 | 683.8335 | 1365.6757 | 683.3415 | G | 1429.6012 | 715.3043 | 1412.5747 | 706.7910 | 1411.5907 | 706.2990 | 13 |
| 10 | 1480.7390 | 740.8732 | 1463.7125 | 732.3599 | 1462.7285 | 731.8679 | P | 1372.5798 | 686.7935 | 1355.5532 | 678.2802 | 1354.5692 | 677.7882 | 12 |
| 11 | 1609.7816 | 805.3945 | 1592.7551 | 796.8812 | 1591.7711 | 796.3892 | E | 1275.5270 | 638.2671 | 1258.5005 | 629.7539 | 1257.5164 | 629.2619 | 11 |
| 12 | 1680.8188 | 840.9130 | 1663.7922 | 832.3997 | 1662.8082 | 831.9077 | A | 1146.4844 | 573.7458 | 1129.4579 | 565.2326 | 1128.4738 | 564.7406 | 10 |
| 13 | 1808.8773 | 904.9423 | 1791.8508 | 896.4290 | 1790.8668 | 895.9370 | Q | 1075.4473 | 538.2273 | 1058.4208 | 529.7140 | 1057.4367 | 529.2220 | 9 |
| 14 | 1879.9144 | 940.4609 | 1862.8879 | 931.9476 | 1861.9039 | 931.4556 | A | 947.3887 | 474.1980 | 930.3622 | 465.6847 | 929.3782 | 465.1927 | 8 |
| 15 | 2008.9570 | 1004.9822 | 1991.9305 | 996.4689 | 1990.9465 | 995.9769 | E | 876.3516 | 438.6794 | 859.3251 | 430.1662 | 858.3410 | 429.6742 | 7 |
| 16 | 2079.9942 | 1040.5007 | 2062.9676 | 1031.9874 | 2061.9836 | 1031.4954 | A | 747.3090 | 374.1581 | 730.2825 | 365.6449 | 729.2985 | 365.1529 | 6 |
| 17 | 2308.0510 | 1154.5291 | 2291.0245 | 1146.0159 | 2290.0405 | 1145.5239 | C | 676.2719 | 338.6396 | 659.2454 | 330.1263 | 658.2613 | 329.6343 | 5 |
| 18 | 2395.0830 | 1198.0452 | 2378.0565 | 1189.5319 | 2377.0725 | 1189.0399 | S | 448.2150 | 224.6112 | 431.1885 | 216.0979 | 430.2045 | 215.6059 | 4 |
| 19 | 2452.1045 | 1226.5559 | 2435.0780 | 1218.0426 | 2434.0939 | 1217.5506 | G | 361.1830 | 181.0951 | 344.1565 | 172.5819 | 343.1724 | 172.0899 | 3 |
| 20 | 2581.1471 | 1291.0772 | 2564.1206 | 1282.5639 | 2563.1365 | 1282.0719 | E | 304.1615 | 152.5844 | 287.1350 | 144.0711 | 286.1510 | 143.5791 | 2 |
| 21 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 22

MS/MS Fragmentation of **TLSDYNIQKESTLHLVLR**

Found in **P62987**, Ubiquitin-60S ribosomal protein L40 OS=Homo sapiens GN=UBA52 PE=1 SV=2



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2587.3242

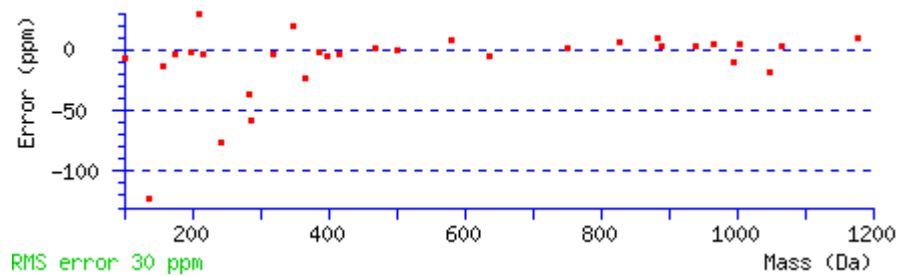
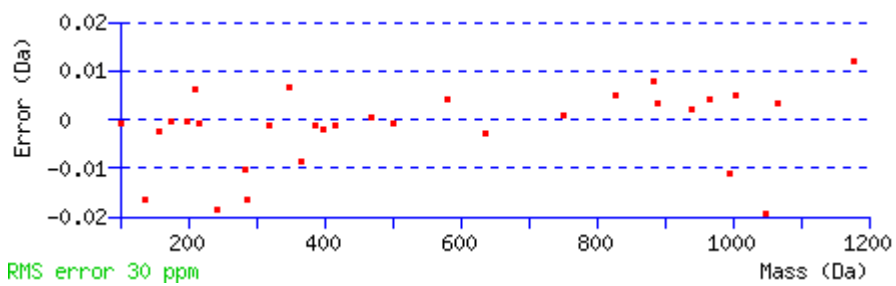
Variable modifications:

N6 : Deamidated (NQ)

K9 : Sumo 3 (K)

Ions Score: 10 Expect: 1.7e+02

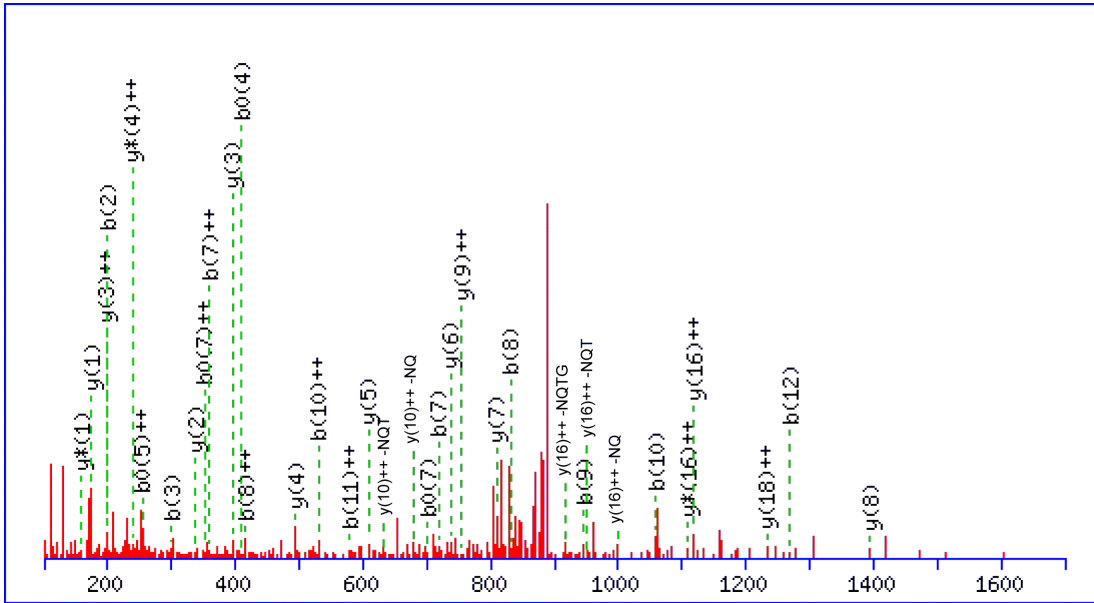
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 102.0550 | 51.5311 | | | 84.0444 | 42.5258 | T | | | | | | | 18 |
| 2 | 215.1390 | 108.0731 | | | 197.1285 | 99.0679 | L | 2487.2838 | 1244.1455 | 2470.2572 | 1235.6323 | 2469.2732 | 1235.1403 | 17 |
| 3 | 302.1710 | 151.5892 | | | 284.1605 | 142.5839 | S | 2374.1997 | 1187.6035 | 2357.1732 | 1179.0902 | 2356.1892 | 1178.5982 | 16 |
| 4 | 417.1980 | 209.1026 | | | 399.1874 | 200.0974 | D | 2287.1677 | 1144.0875 | 2270.1412 | 1135.5742 | 2269.1571 | 1135.0822 | 15 |
| 5 | 580.2613 | 290.6343 | | | 562.2508 | 281.6290 | Y | 2172.1408 | 1086.5740 | 2155.1142 | 1078.0607 | 2154.1302 | 1077.5687 | 14 |
| 6 | 695.2883 | 348.1478 | 678.2617 | 339.6345 | 677.2777 | 339.1425 | N | 2009.0774 | 1005.0424 | 1992.0509 | 996.5291 | 1991.0669 | 996.0371 | 13 |
| 7 | 808.3723 | 404.6898 | 791.3458 | 396.1765 | 790.3618 | 395.6845 | I | 1894.0505 | 947.5289 | 1877.0239 | 939.0156 | 1876.0399 | 938.5236 | 12 |
| 8 | 936.4309 | 468.7191 | 919.4044 | 460.2058 | 918.4203 | 459.7138 | Q | 1780.9664 | 890.9868 | 1763.9399 | 882.4736 | 1762.9559 | 881.9816 | 11 |
| 9 | 1521.7180 | 761.3626 | 1504.6914 | 752.8494 | 1503.7074 | 752.3573 | K | 1652.9078 | 826.9576 | 1635.8813 | 818.4443 | 1634.8973 | 817.9523 | 10 |
| 10 | 1650.7606 | 825.8839 | 1633.7340 | 817.3706 | 1632.7500 | 816.8786 | E | 1067.6208 | 534.3140 | 1050.5942 | 525.8007 | 1049.6102 | 525.3087 | 9 |
| 11 | 1737.7926 | 869.3999 | 1720.7661 | 860.8867 | 1719.7820 | 860.3947 | S | 938.5782 | 469.7927 | 921.5516 | 461.2795 | 920.5676 | 460.7874 | 8 |
| 12 | 1838.8403 | 919.9238 | 1821.8137 | 911.4105 | 1820.8297 | 910.9185 | T | 851.5461 | 426.2767 | 834.5196 | 417.7634 | 833.5356 | 417.2714 | 7 |
| 13 | 1951.9243 | 976.4658 | 1934.8978 | 967.9525 | 1933.9138 | 967.4605 | L | 750.4985 | 375.7529 | 733.4719 | 367.2396 | | | 6 |
| 14 | 2088.9833 | 1044.9953 | 2071.9567 | 1036.4820 | 2070.9727 | 1035.9900 | H | 637.4144 | 319.2108 | 620.3879 | 310.6976 | | | 5 |
| 15 | 2202.0673 | 1101.5373 | 2185.0408 | 1093.0240 | 2184.0568 | 1092.5320 | L | 500.3555 | 250.6814 | 483.3289 | 242.1681 | | | 4 |
| 16 | 2301.1357 | 1151.0715 | 2284.1092 | 1142.5582 | 2283.1252 | 1142.0662 | V | 387.2714 | 194.1394 | 370.2449 | 185.6261 | | | 3 |
| 17 | 2414.2198 | 1207.6135 | 2397.1932 | 1199.1003 | 2396.2092 | 1198.6083 | L | 288.2030 | 144.6051 | 271.1765 | 136.0919 | | | 2 |
| 18 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 23

MS/MS Fragmentation of **VVTKPGHIINPIKAEDVGYR**

Found in **Q9BVJ6**, U3 small nucleolar RNA-associated protein 14 homolog A OS=Homo sapiens GN=UTP14A PE=1 SV=1



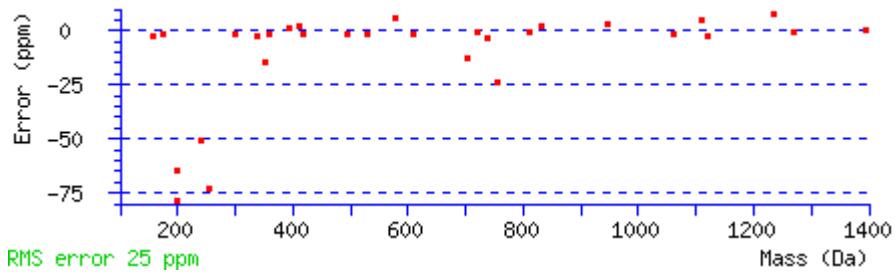
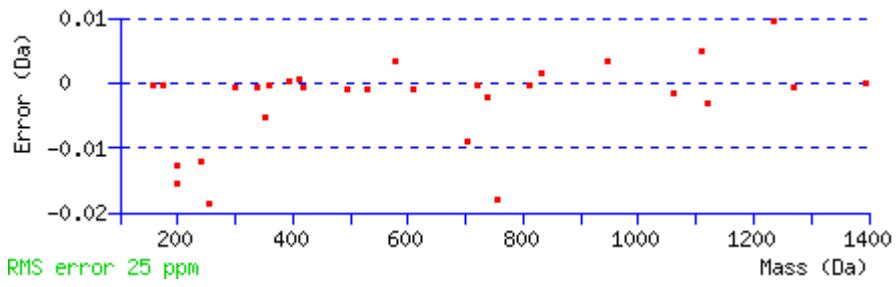
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2662.4191

Variable modifications:

K13 : Sumo 3 (K)

Ions Score: 2 Expect: 3.6e+02

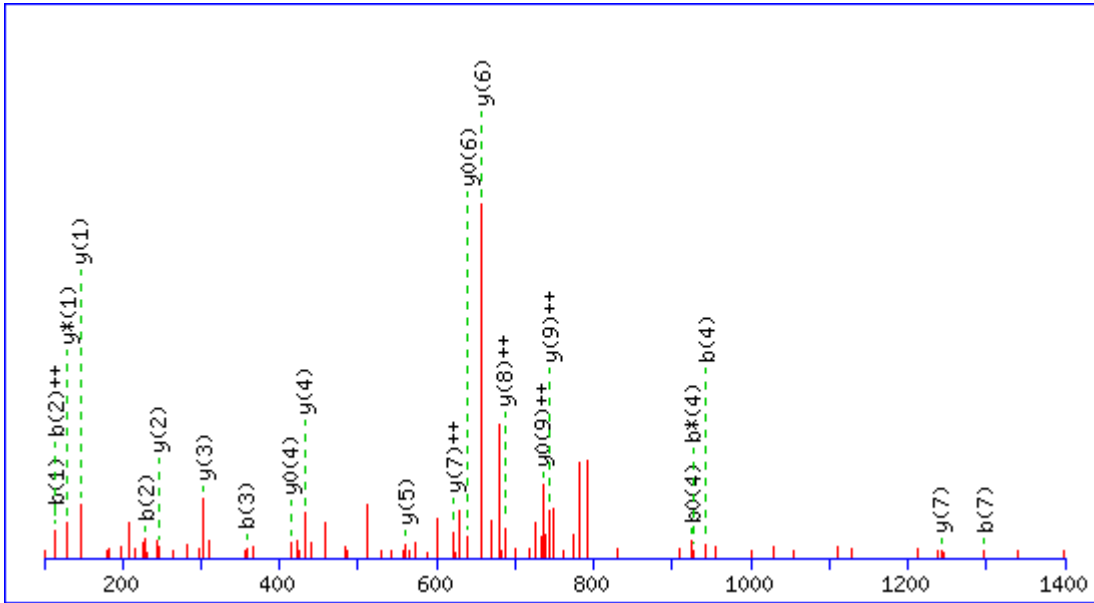
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 100.0757 | 50.5415 | | | | | V | | | | | | | 20 |
| 2 | 199.1441 | 100.0757 | | | | | V | 2564.3580 | 1282.6826 | 2547.3314 | 1274.1693 | 2546.3474 | 1273.6773 | 19 |
| 3 | 300.1918 | 150.5995 | | | 282.1812 | 141.5942 | T | 2465.2895 | 1233.1484 | 2448.2630 | 1224.6351 | 2447.2790 | 1224.1431 | 18 |
| 4 | 428.2867 | 214.6470 | 411.2602 | 206.1337 | 410.2762 | 205.6417 | K | 2364.2419 | 1182.6246 | 2347.2153 | 1174.1113 | 2346.2313 | 1173.6193 | 17 |
| 5 | 525.3395 | 263.1734 | 508.3130 | 254.6601 | 507.3289 | 254.1681 | P | 2236.1469 | 1118.5771 | 2219.1204 | 1110.0638 | 2218.1363 | 1109.5718 | 16 |
| 6 | 582.3610 | 291.6841 | 565.3344 | 283.1709 | 564.3504 | 282.6788 | G | 2139.0941 | 1070.0507 | 2122.0676 | 1061.5374 | 2121.0836 | 1061.0454 | 15 |
| 7 | 719.4199 | 360.2136 | 702.3933 | 351.7003 | 701.4093 | 351.2083 | H | 2082.0727 | 1041.5400 | 2065.0461 | 1033.0267 | 2064.0621 | 1032.5347 | 14 |
| 8 | 832.5040 | 416.7556 | 815.4774 | 408.2423 | 814.4934 | 407.7503 | I | 1945.0138 | 973.0105 | 1927.9872 | 964.4972 | 1927.0032 | 964.0052 | 13 |
| 9 | 945.5880 | 473.2976 | 928.5615 | 464.7844 | 927.5774 | 464.2924 | I | 1831.9297 | 916.4685 | 1814.9032 | 907.9552 | 1813.9191 | 907.4632 | 12 |
| 10 | 1059.6309 | 530.3191 | 1042.6044 | 521.8058 | 1041.6204 | 521.3138 | N | 1718.8456 | 859.9265 | 1701.8191 | 851.4132 | 1700.8351 | 850.9212 | 11 |
| 11 | 1156.6837 | 578.8455 | 1139.6572 | 570.3322 | 1138.6731 | 569.8402 | P | 1604.8027 | 802.9050 | 1587.7762 | 794.3917 | 1586.7921 | 793.8997 | 10 |
| 12 | 1269.7678 | 635.3875 | 1252.7412 | 626.8742 | 1251.7572 | 626.3822 | I | 1507.7499 | 754.3786 | 1490.7234 | 745.8653 | 1489.7394 | 745.3733 | 9 |
| 13 | 1855.0548 | 928.0311 | 1838.0283 | 919.5178 | 1837.0443 | 919.0258 | K | 1394.6659 | 697.8366 | 1377.6393 | 689.3233 | 1376.6553 | 688.8313 | 8 |
| 14 | 1926.0920 | 963.5496 | 1909.0654 | 955.0363 | 1908.0814 | 954.5443 | A | 809.3788 | 405.1930 | 792.3523 | 396.6798 | 791.3682 | 396.1878 | 7 |
| 15 | 2055.1345 | 1028.0709 | 2038.1080 | 1019.5576 | 2037.1240 | 1019.0656 | E | 738.3417 | 369.6745 | 721.3151 | 361.1612 | 720.3311 | 360.6692 | 6 |
| 16 | 2170.1615 | 1085.5844 | 2153.1349 | 1077.0711 | 2152.1509 | 1076.5791 | D | 609.2991 | 305.1532 | 592.2726 | 296.6399 | 591.2885 | 296.1479 | 5 |
| 17 | 2269.2299 | 1135.1186 | 2252.2034 | 1126.6053 | 2251.2193 | 1126.1133 | V | 494.2722 | 247.6397 | 477.2456 | 239.1264 | | | 4 |
| 18 | 2326.2514 | 1163.6293 | 2309.2248 | 1155.1160 | 2308.2408 | 1154.6240 | G | 395.2037 | 198.1055 | 378.1772 | 189.5922 | | | 3 |
| 19 | 2489.3147 | 1245.1610 | 2472.2882 | 1236.6477 | 2471.3041 | 1236.1557 | Y | 338.1823 | 169.5948 | 321.1557 | 161.0815 | | | 2 |
| 20 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 24

MS/MS Fragmentation of **ADEKPKEGVK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1598.7900

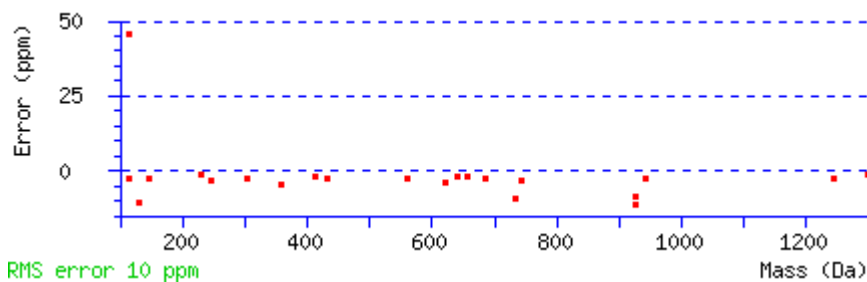
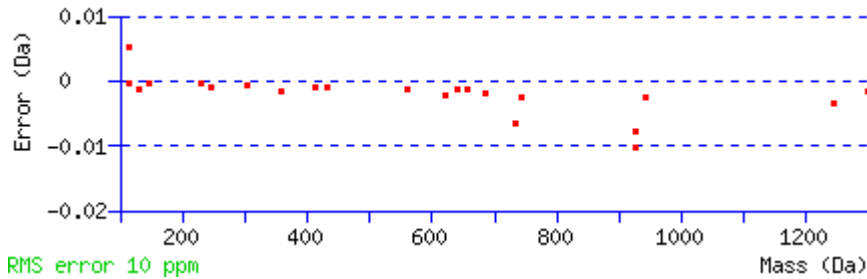
Variable modifications:

N-term : Acetyl (N-term)

K4 : Sumo 3 (K)

Ions Score: 24 Expect: 5.4

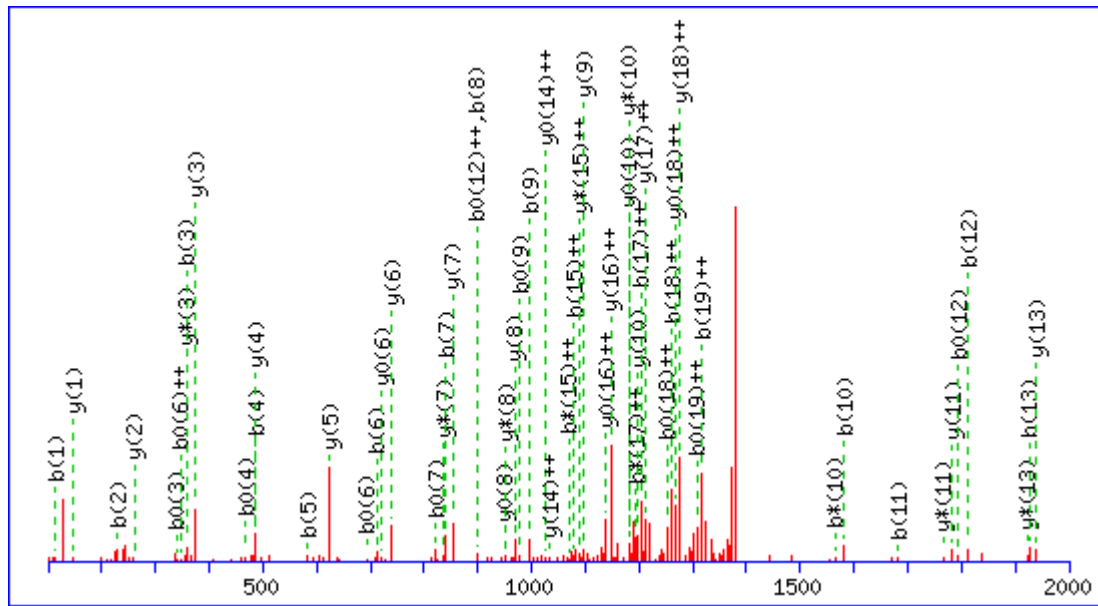
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 10 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 1486.7496 | 743.8784 | 1469.7231 | 735.3652 | 1468.7390 | 734.8732 | 9 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 1371.7227 | 686.3650 | 1354.6961 | 677.8517 | 1353.7121 | 677.3597 | 8 |
| 4 | 943.4116 | 472.2094 | 926.3850 | 463.6961 | 925.4010 | 463.2041 | K | 1242.6801 | 621.8437 | 1225.6535 | 613.3304 | 1224.6695 | 612.8384 | 7 |
| 5 | 1040.4643 | 520.7358 | 1023.4378 | 512.2225 | 1022.4538 | 511.7305 | P | 657.3930 | 329.2001 | 640.3665 | 320.6869 | 639.3824 | 320.1949 | 6 |
| 6 | 1168.5593 | 584.7833 | 1151.5327 | 576.2700 | 1150.5487 | 575.7780 | K | 560.3402 | 280.6738 | 543.3137 | 272.1605 | 542.3297 | 271.6685 | 5 |
| 7 | 1297.6019 | 649.3046 | 1280.5753 | 640.7913 | 1279.5913 | 640.2993 | E | 432.2453 | 216.6263 | 415.2187 | 208.1130 | 414.2347 | 207.6210 | 4 |
| 8 | 1354.6233 | 677.8153 | 1337.5968 | 669.3020 | 1336.6128 | 668.8100 | G | 303.2027 | 152.1050 | 286.1761 | 143.5917 | | | 3 |
| 9 | 1453.6918 | 727.3495 | 1436.6652 | 718.8362 | 1435.6812 | 718.3442 | V | 246.1812 | 123.5942 | 229.1547 | 115.0810 | | | 2 |
| 10 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 26

MS/MS Fragmentation of **ADEKPKEGVKTENNDHNLK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2778.3420

Variable modifications:

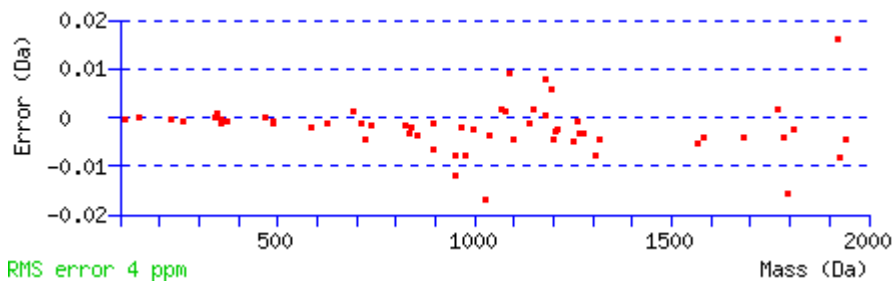
N-term : Acetyl (N-term)

K10 : Sumo 3 (K)

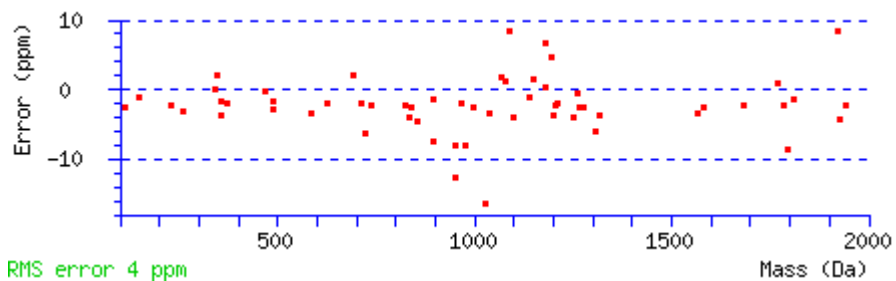
N13 : Deamidated (NQ)

Ions Score: 87 Expect: 7.3e-06

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2666.3016 | 1333.6545 | 2649.2751 | 1325.1412 | 2648.2911 | 1324.6492 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2551.2747 | 1276.1410 | 2534.2481 | 1267.6277 | 2533.2641 | 1267.1357 | 18 |
| 4 | 486.2195 | 243.6134 | 469.1929 | 235.1001 | 468.2089 | 234.6081 | K | 2422.2321 | 1211.6197 | 2405.2055 | 1203.1064 | 2404.2215 | 1202.6144 | 17 |
| 5 | 583.2722 | 292.1397 | 566.2457 | 283.6265 | 565.2617 | 283.1345 | P | 2294.1371 | 1147.5722 | 2277.1106 | 1139.0589 | 2276.1266 | 1138.5669 | 16 |
| 6 | 711.3672 | 356.1872 | 694.3406 | 347.6740 | 693.3566 | 347.1819 | K | 2197.0844 | 1099.0458 | 2180.0578 | 1090.5325 | 2179.0738 | 1090.0405 | 15 |
| 7 | 840.4098 | 420.7085 | 823.3832 | 412.1953 | 822.3992 | 411.7032 | E | 2068.9894 | 1034.9983 | 2051.9629 | 1026.4851 | 2050.9788 | 1025.9931 | 14 |
| 8 | 897.4312 | 449.2193 | 880.4047 | 440.7060 | 879.4207 | 440.2140 | G | 1939.9468 | 970.4770 | 1922.9203 | 961.9638 | 1921.9362 | 961.4718 | 13 |
| 9 | 996.4997 | 498.7535 | 979.4731 | 490.2402 | 978.4891 | 489.7482 | V | 1882.9253 | 941.9663 | 1865.8988 | 933.4530 | 1864.9148 | 932.9610 | 12 |
| 10 | 1581.7867 | 791.3970 | 1564.7602 | 782.8837 | 1563.7762 | 782.3917 | K | 1783.8569 | 892.4321 | 1766.8304 | 883.9188 | 1765.8464 | 883.4268 | 11 |
| 11 | 1682.8344 | 841.9208 | 1665.8079 | 833.4076 | 1664.8238 | 832.9156 | T | 1198.5699 | 599.7886 | 1181.5433 | 591.2753 | 1180.5593 | 590.7833 | 10 |
| 12 | 1811.8770 | 906.4421 | 1794.8504 | 897.9289 | 1793.8664 | 897.4369 | E | 1097.5222 | 549.2647 | 1080.4956 | 540.7515 | 1079.5116 | 540.2594 | 9 |
| 13 | 1926.9039 | 963.9556 | 1909.8774 | 955.4423 | 1908.8934 | 954.9503 | N | 968.4796 | 484.7434 | 951.4530 | 476.2302 | 950.4690 | 475.7381 | 8 |
| 14 | 2040.9469 | 1020.9771 | 2023.9203 | 1012.4638 | 2022.9363 | 1011.9718 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 15 | 2155.9738 | 1078.4905 | 2138.9473 | 1069.9773 | 2137.9632 | 1069.4853 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2293.0327 | 1147.0200 | 2276.0062 | 1138.5067 | 2275.0222 | 1138.0147 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2406.1168 | 1203.5620 | 2389.0902 | 1195.0488 | 2388.1062 | 1194.5567 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2520.1597 | 1260.5835 | 2503.1332 | 1252.0702 | 2502.1491 | 1251.5782 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2633.2438 | 1317.1255 | 2616.2172 | 1308.6123 | 2615.2332 | 1308.1202 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



RMS error 4 ppm

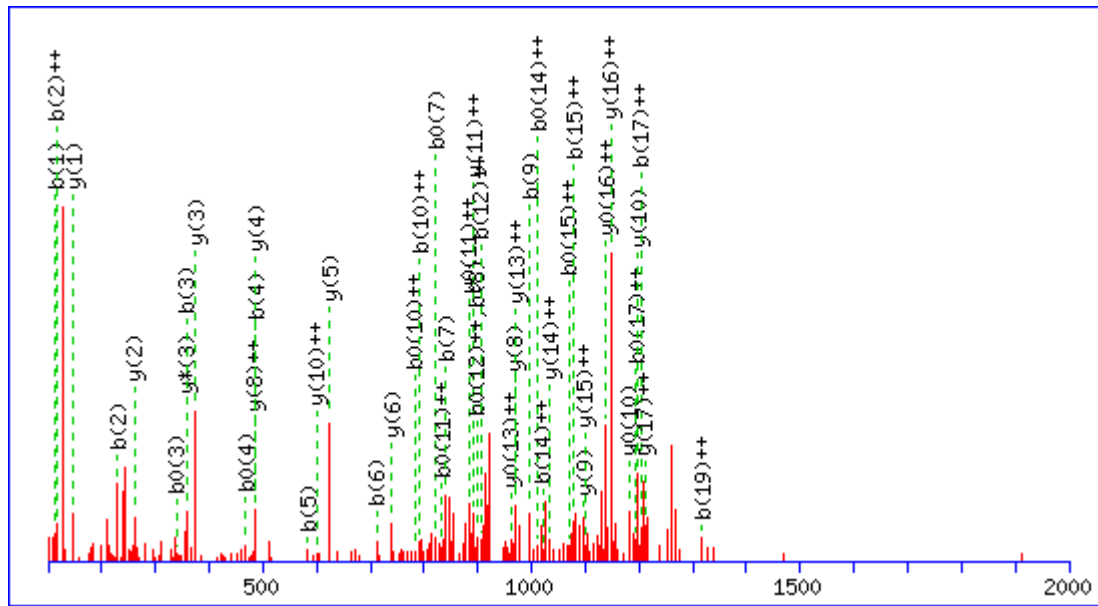


RMS error 4 ppm

IDENTIFICATION 27

MS/MS Fragmentation of **ADEKPKEGVKTENNDHNLK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2778.3420

Variable modifications:

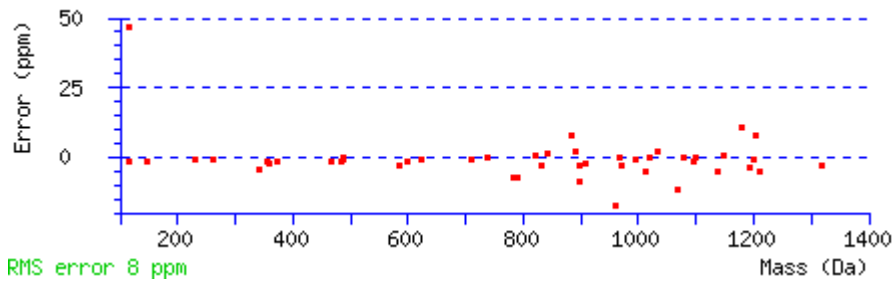
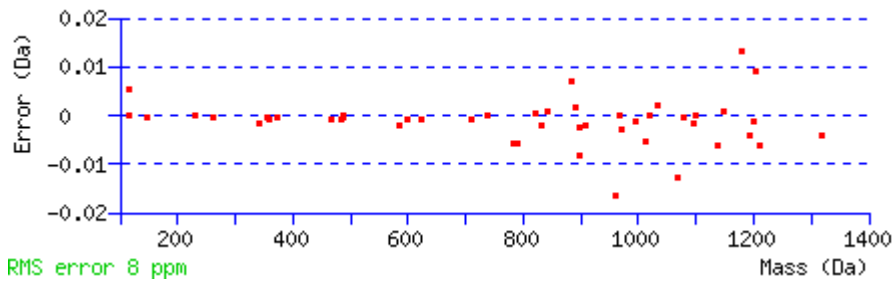
N-term : Acetyl (N-term)

K10 : Sumo 3 (K)

N14 : Deamidated (NQ)

Ions Score: 45 Expect: 0.1

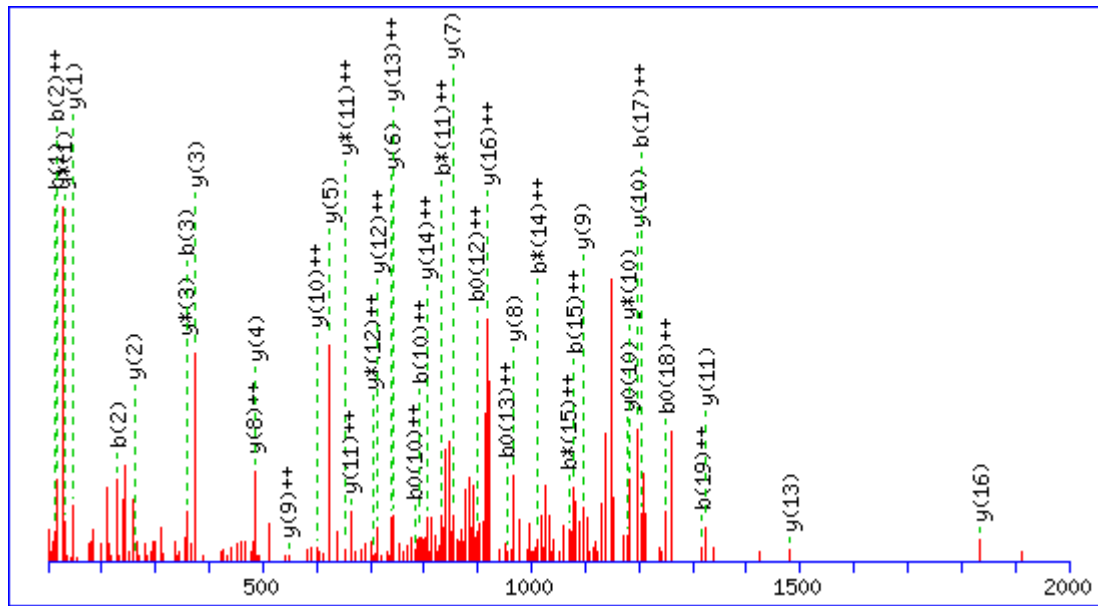
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2666.3016 | 1333.6545 | 2649.2751 | 1325.1412 | 2648.2911 | 1324.6492 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2551.2747 | 1276.1410 | 2534.2481 | 1267.6277 | 2533.2641 | 1267.1357 | 18 |
| 4 | 486.2195 | 243.6134 | 469.1929 | 235.1001 | 468.2089 | 234.6081 | K | 2422.2321 | 1211.6197 | 2405.2055 | 1203.1064 | 2404.2215 | 1202.6144 | 17 |
| 5 | 583.2722 | 292.1397 | 566.2457 | 283.6265 | 565.2617 | 283.1345 | P | 2294.1371 | 1147.5722 | 2277.1106 | 1139.0589 | 2276.1266 | 1138.5669 | 16 |
| 6 | 711.3672 | 356.1872 | 694.3406 | 347.6740 | 693.3566 | 347.1819 | K | 2197.0844 | 1099.0458 | 2180.0578 | 1090.5325 | 2179.0738 | 1090.0405 | 15 |
| 7 | 840.4098 | 420.7085 | 823.3832 | 412.1953 | 822.3992 | 411.7032 | E | 2068.9894 | 1034.9983 | 2051.9629 | 1026.4851 | 2050.9788 | 1025.9931 | 14 |
| 8 | 897.4312 | 449.2193 | 880.4047 | 440.7060 | 879.4207 | 440.2140 | G | 1939.9468 | 970.4770 | 1922.9203 | 961.9638 | 1921.9362 | 961.4718 | 13 |
| 9 | 996.4997 | 498.7535 | 979.4731 | 490.2402 | 978.4891 | 489.7482 | V | 1882.9253 | 941.9663 | 1865.8988 | 933.4530 | 1864.9148 | 932.9610 | 12 |
| 10 | 1581.7867 | 791.3970 | 1564.7602 | 782.8837 | 1563.7762 | 782.3917 | K | 1783.8569 | 892.4321 | 1766.8304 | 883.9188 | 1765.8464 | 883.4268 | 11 |
| 11 | 1682.8344 | 841.9208 | 1665.8079 | 833.4076 | 1664.8238 | 832.9156 | T | 1198.5699 | 599.7886 | 1181.5433 | 591.2753 | 1180.5593 | 590.7833 | 10 |
| 12 | 1811.8770 | 906.4421 | 1794.8504 | 897.9289 | 1793.8664 | 897.4369 | E | 1097.5222 | 549.2647 | 1080.4956 | 540.7515 | 1079.5116 | 540.2594 | 9 |
| 13 | 1925.9199 | 963.4636 | 1908.8934 | 954.9503 | 1907.9094 | 954.4583 | N | 968.4796 | 484.7434 | 951.4530 | 476.2302 | 950.4690 | 475.7381 | 8 |
| 14 | 2040.9469 | 1020.9771 | 2023.9203 | 1012.4638 | 2022.9363 | 1011.9718 | N | 854.4367 | 427.7220 | 837.4101 | 419.2087 | 836.4261 | 418.7167 | 7 |
| 15 | 2155.9738 | 1078.4905 | 2138.9473 | 1069.9773 | 2137.9632 | 1069.4853 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2293.0327 | 1147.0200 | 2276.0062 | 1138.5067 | 2275.0222 | 1138.0147 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2406.1168 | 1203.5620 | 2389.0902 | 1195.0488 | 2388.1062 | 1194.5567 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2520.1597 | 1260.5835 | 2503.1332 | 1252.0702 | 2502.1491 | 1251.5782 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2633.2438 | 1317.1255 | 2616.2172 | 1308.6123 | 2615.2332 | 1308.1202 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 28

MS/MS Fragmentation of **ADEKPKEGVKTENNDHNLK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2777.3580

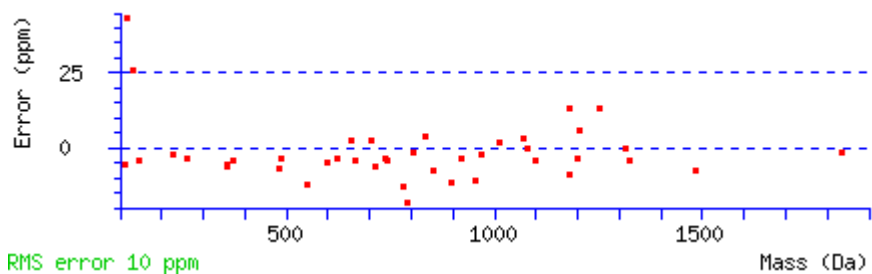
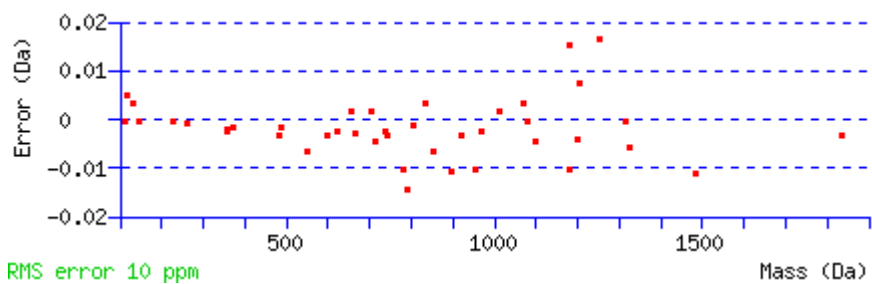
Variable modifications:

N-term : Acetyl (N-term)

K4 : Sumo 3 (K)

Ions Score: 43 Expect: 0.18

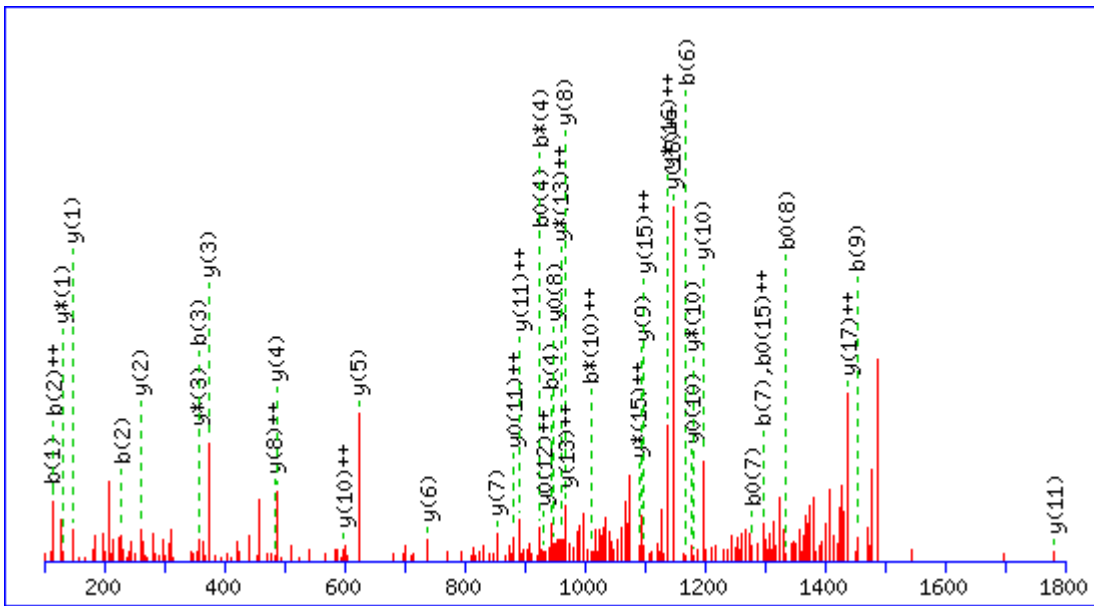
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2665.3176 | 1333.1624 | 2648.2911 | 1324.6492 | 2647.3070 | 1324.1572 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2550.2907 | 1275.6490 | 2533.2641 | 1267.1357 | 2532.2801 | 1266.6437 | 18 |
| 4 | 943.4116 | 472.2094 | 926.3850 | 463.6961 | 925.4010 | 463.2041 | K | 2421.2481 | 1211.1277 | 2404.2215 | 1202.6144 | 2403.2375 | 1202.1224 | 17 |
| 5 | 1040.4643 | 520.7358 | 1023.4378 | 512.2225 | 1022.4538 | 511.7305 | P | 1835.9610 | 918.4841 | 1818.9345 | 909.9709 | 1817.9504 | 909.4789 | 16 |
| 6 | 1168.5593 | 584.7833 | 1151.5327 | 576.2700 | 1150.5487 | 575.7780 | K | 1738.9082 | 869.9578 | 1721.8817 | 861.4445 | 1720.8977 | 860.9525 | 15 |
| 7 | 1297.6019 | 649.3046 | 1280.5753 | 640.7913 | 1279.5913 | 640.2993 | E | 1610.8133 | 805.9103 | 1593.7867 | 797.3970 | 1592.8027 | 796.9050 | 14 |
| 8 | 1354.6233 | 677.8153 | 1337.5968 | 669.3020 | 1336.6128 | 668.8100 | G | 1481.7707 | 741.3890 | 1464.7441 | 732.8757 | 1463.7601 | 732.3837 | 13 |
| 9 | 1453.6918 | 727.3495 | 1436.6652 | 718.8362 | 1435.6812 | 718.3442 | V | 1424.7492 | 712.8782 | 1407.7227 | 704.3650 | 1406.7387 | 703.8730 | 12 |
| 10 | 1581.7867 | 791.3970 | 1564.7602 | 782.8837 | 1563.7762 | 782.3917 | K | 1325.6808 | 663.3440 | 1308.6543 | 654.8308 | 1307.6702 | 654.3388 | 11 |
| 11 | 1682.8344 | 841.9208 | 1665.8079 | 833.4076 | 1664.8238 | 832.9156 | T | 1197.5858 | 599.2966 | 1180.5593 | 590.7833 | 1179.5753 | 590.2913 | 10 |
| 12 | 1811.8770 | 906.4421 | 1794.8504 | 897.9289 | 1793.8664 | 897.4369 | E | 1096.5382 | 548.7727 | 1079.5116 | 540.2594 | 1078.5276 | 539.7674 | 9 |
| 13 | 1925.9199 | 963.4636 | 1908.8934 | 954.9503 | 1907.9094 | 954.4583 | N | 967.4956 | 484.2514 | 950.4690 | 475.7381 | 949.4850 | 475.2461 | 8 |
| 14 | 2039.9629 | 1020.4851 | 2022.9363 | 1011.9718 | 2021.9523 | 1011.4798 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 15 | 2154.9898 | 1077.9985 | 2137.9632 | 1069.4853 | 2136.9792 | 1068.9933 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2292.0487 | 1146.5280 | 2275.0222 | 1138.0147 | 2274.0381 | 1137.5227 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2405.1328 | 1203.0700 | 2388.1062 | 1194.5567 | 2387.1222 | 1194.0647 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2519.1757 | 1260.0915 | 2502.1491 | 1251.5782 | 2501.1651 | 1251.0862 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2632.2598 | 1316.6335 | 2615.2332 | 1308.1202 | 2614.2492 | 1307.6282 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 29

MS/MS Fragmentation of **ADEKPKEGVKTENNDHINLK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 3234.5501

Variable modifications:

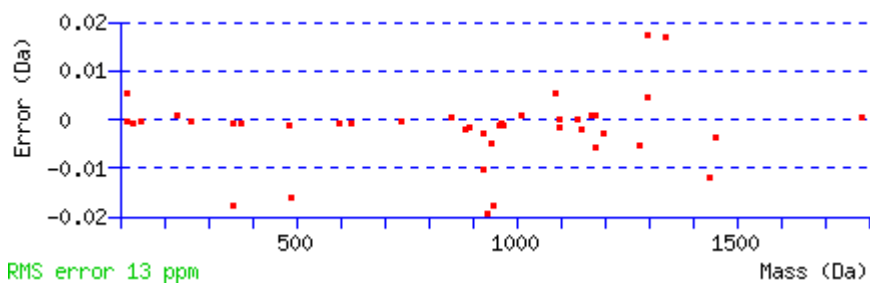
N-term : Acetyl (N-term)

K4 : Sumo 3 (K)

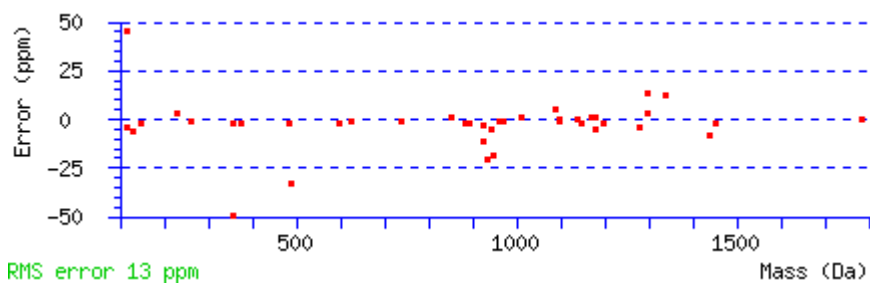
K10 : Sumo 3 (K)

Ions Score: 33 Expect: 2.1

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 3122.5097 | 1561.7585 | 3105.4832 | 1553.2452 | 3104.4992 | 1552.7532 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 3007.4828 | 1504.2450 | 2990.4562 | 1495.7318 | 2989.4722 | 1495.2397 | 18 |
| 4 | 943.4116 | 472.2094 | 926.3850 | 463.6961 | 925.4010 | 463.2041 | K | 2878.4402 | 1439.7237 | 2861.4136 | 1431.2105 | 2860.4296 | 1430.7184 | 17 |
| 5 | 1040.4643 | 520.7358 | 1023.4378 | 512.2225 | 1022.4538 | 511.7305 | P | 2293.1531 | 1147.0802 | 2276.1266 | 1138.5669 | 2275.1425 | 1138.0749 | 16 |
| 6 | 1168.5593 | 584.7833 | 1151.5327 | 576.2700 | 1150.5487 | 575.7780 | K | 2196.1003 | 1098.5538 | 2179.0738 | 1090.0405 | 2178.0898 | 1089.5485 | 15 |
| 7 | 1297.6019 | 649.3046 | 1280.5753 | 640.7913 | 1279.5913 | 640.2993 | E | 2068.0054 | 1034.5063 | 2050.9788 | 1025.9931 | 2049.9948 | 1025.5010 | 14 |
| 8 | 1354.6233 | 677.8153 | 1337.5968 | 669.3020 | 1336.6128 | 668.8100 | G | 1938.9628 | 969.9850 | 1921.9362 | 961.4718 | 1920.9522 | 960.9798 | 13 |
| 9 | 1453.6918 | 727.3495 | 1436.6652 | 718.8362 | 1435.6812 | 718.3442 | V | 1881.9413 | 941.4743 | 1864.9148 | 932.9610 | 1863.9308 | 932.4690 | 12 |
| 10 | 2038.9788 | 1019.9931 | 2021.9523 | 1011.4798 | 2020.9683 | 1010.9878 | K | 1782.8729 | 891.9401 | 1765.8464 | 883.4268 | 1764.8623 | 882.9348 | 11 |
| 11 | 2140.0265 | 1070.5169 | 2123.0000 | 1062.0036 | 2122.0160 | 1061.5116 | T | 1197.5858 | 599.2966 | 1180.5593 | 590.7833 | 1179.5753 | 590.2913 | 10 |
| 12 | 2269.0691 | 1135.0382 | 2252.0426 | 1126.5249 | 2251.0585 | 1126.0329 | E | 1096.5382 | 548.7727 | 1079.5116 | 540.2594 | 1078.5276 | 539.7674 | 9 |
| 13 | 2383.1120 | 1192.0597 | 2366.0855 | 1183.5464 | 2365.1015 | 1183.0544 | N | 967.4956 | 484.2514 | 950.4690 | 475.7381 | 949.4850 | 475.2461 | 8 |
| 14 | 2497.1550 | 1249.0811 | 2480.1284 | 1240.5678 | 2479.1444 | 1240.0758 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 15 | 2612.1819 | 1306.5946 | 2595.1554 | 1298.0813 | 2594.1713 | 1297.5893 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2749.2408 | 1375.1240 | 2732.2143 | 1366.6108 | 2731.2303 | 1366.1188 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2862.3249 | 1431.6661 | 2845.2983 | 1423.1528 | 2844.3143 | 1422.6608 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2976.3678 | 1488.6875 | 2959.3413 | 1480.1743 | 2958.3572 | 1479.6823 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 3089.4519 | 1545.2296 | 3072.4253 | 1536.7163 | 3071.4413 | 1536.2243 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



RMS error 13 ppm

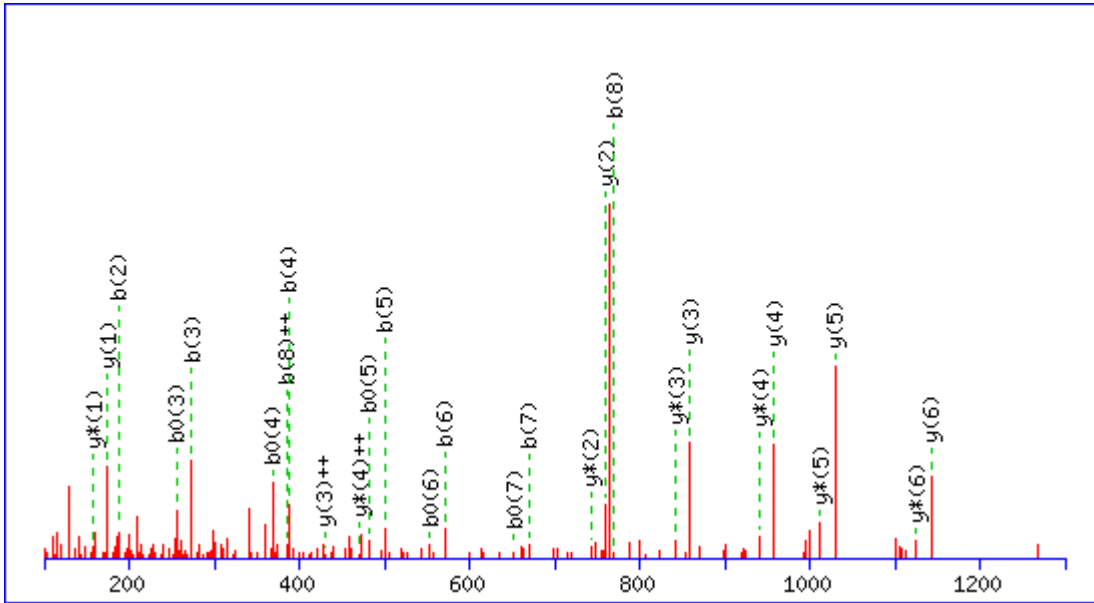


RMS error 13 ppm

IDENTIFICATION 30

MS/MS Fragmentation of **ADSL LAVVKR**

Found in **Q15424**, Scaffold attachment factor B1 OS=Homo sapiens GN=SAFB PE=1 SV=4



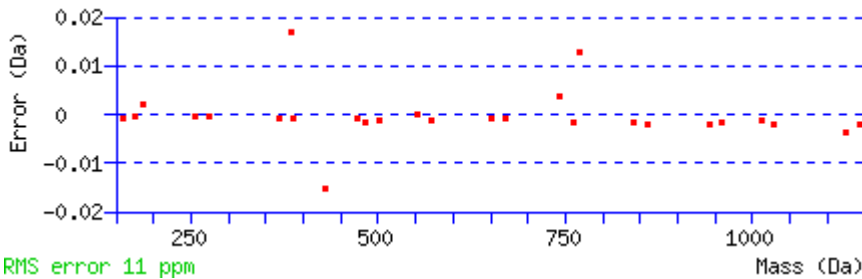
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1527.8369

Variable modifications:

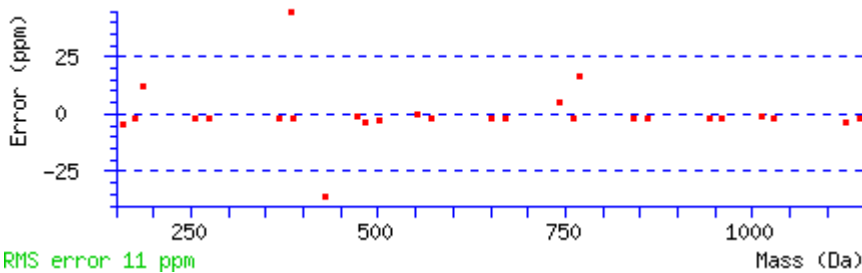
K9 : Sumo 3 (K)

Ions Score: 42 Expect: 0.026

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 72.0444 | 36.5258 | | | | | A | | | | | | | 10 |
| 2 | 187.0713 | 94.0393 | | | 169.0608 | 85.0340 | D | 1457.8071 | 729.4072 | 1440.7805 | 720.8939 | 1439.7965 | 720.4019 | 9 |
| 3 | 274.1034 | 137.5553 | | | 256.0928 | 128.5500 | S | 1342.7801 | 671.8937 | 1325.7536 | 663.3804 | 1324.7696 | 662.8884 | 8 |
| 4 | 387.1874 | 194.0974 | | | 369.1769 | 185.0921 | L | 1255.7481 | 628.3777 | 1238.7215 | 619.8644 | | | 7 |
| 5 | 500.2715 | 250.6394 | | | 482.2609 | 241.6341 | L | 1142.6640 | 571.8357 | 1125.6375 | 563.3224 | | | 6 |
| 6 | 571.3086 | 286.1579 | | | 553.2980 | 277.1527 | A | 1029.5800 | 515.2936 | 1012.5534 | 506.7803 | | | 5 |
| 7 | 670.3770 | 335.6921 | | | 652.3665 | 326.6869 | V | 958.5429 | 479.7751 | 941.5163 | 471.2618 | | | 4 |
| 8 | 769.4454 | 385.2264 | | | 751.4349 | 376.2211 | V | 859.4744 | 430.2409 | 842.4479 | 421.7276 | | | 3 |
| 9 | 1354.7325 | 677.8699 | 1337.7060 | 669.3566 | 1336.7219 | 668.8646 | K | 760.4060 | 380.7067 | 743.3795 | 372.1934 | | | 2 |
| 10 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



RMS error 11 ppm

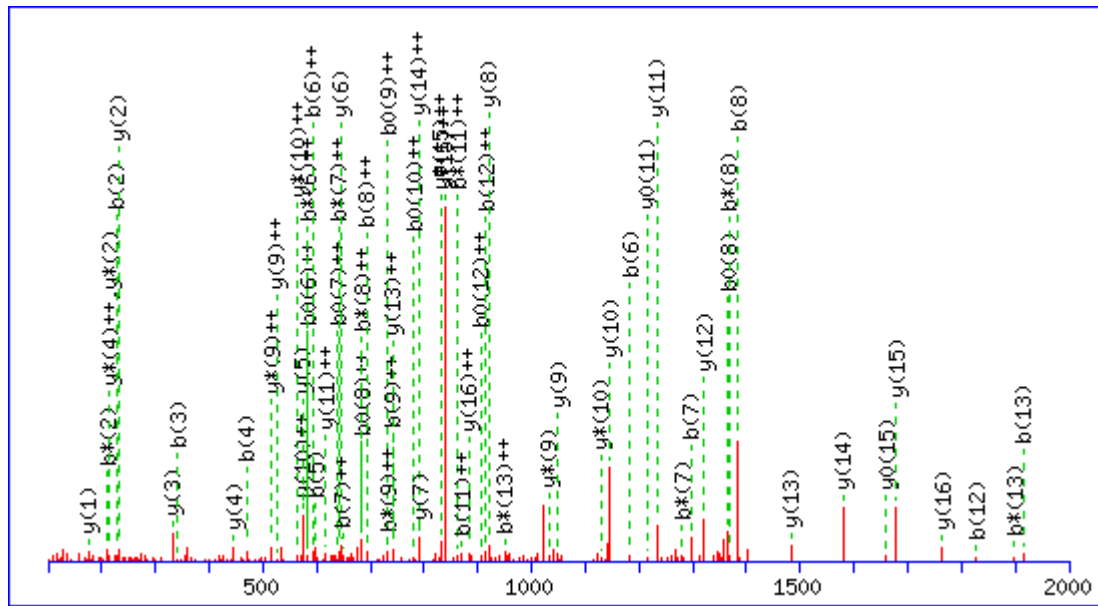


RMS error 11 ppm

IDENTIFICATION 31

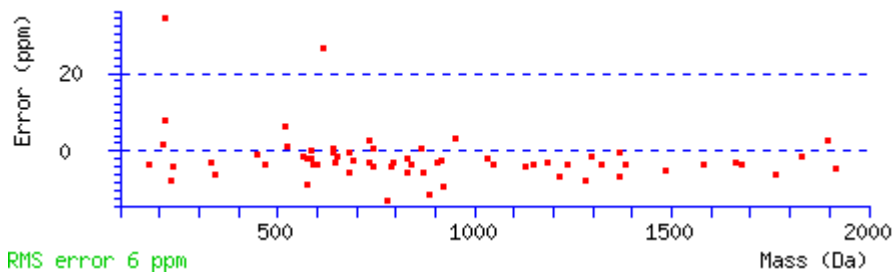
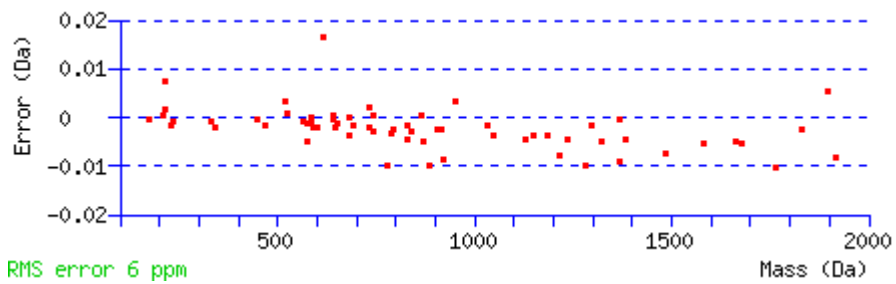
MS/MS Fragmentation of **ARLQEKLSPPYSSPQFEFAQDVGR**

Found in **Q13263**, Transcription intermediary factor 1-beta OS=Homo sapiens GN=TRIM28 PE=1 SV=5



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 3059.5060 Variable modifications: K6 : Sumo 3 (K) Ions Score: 108
 Expect: 5e-08

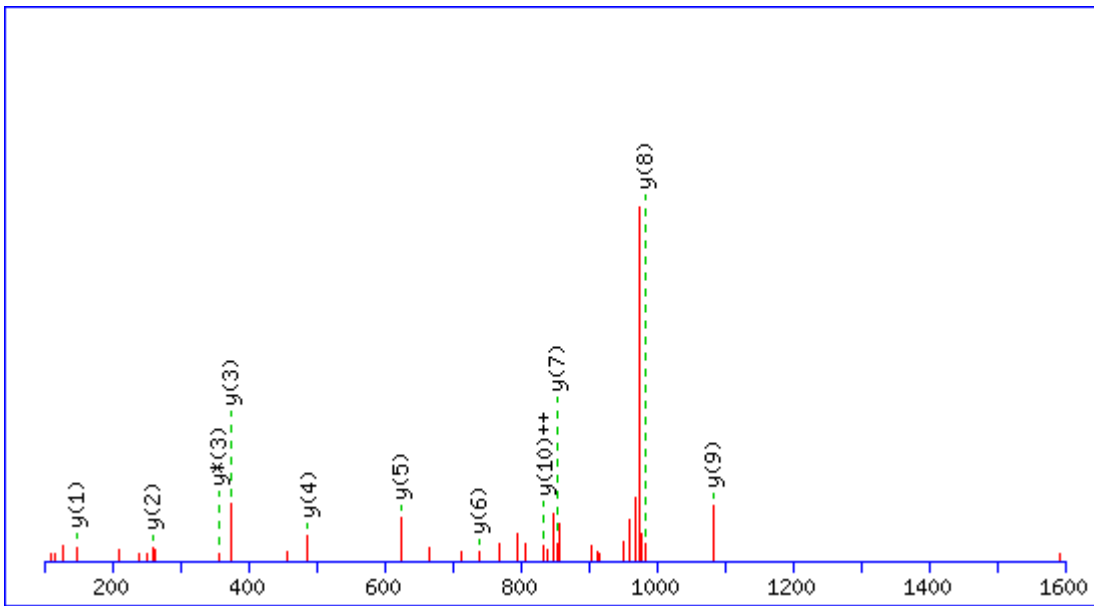
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 72.0444 | 36.5258 | | | | | A | | | | | | | 23 |
| 2 | 228.1455 | 114.5764 | 211.1190 | 106.0631 | | | R | 2989.4762 | 1495.2418 | 2972.4497 | 1486.7285 | 2971.4657 | 1486.2365 | 22 |
| 3 | 341.2296 | 171.1184 | 324.2030 | 162.6051 | | | L | 2833.3751 | 1417.1912 | 2816.3486 | 1408.6779 | 2815.3646 | 1408.1859 | 21 |
| 4 | 469.2881 | 235.1477 | 452.2616 | 226.6344 | | | Q | 2720.2911 | 1360.6492 | 2703.2645 | 1352.1359 | 2702.2805 | 1351.6439 | 20 |
| 5 | 598.3307 | 299.6690 | 581.3042 | 291.1557 | 580.3202 | 290.6637 | E | 2592.2325 | 1296.6199 | 2575.2059 | 1288.1066 | 2574.2219 | 1287.6146 | 19 |
| 6 | 1183.6178 | 592.3125 | 1166.5913 | 583.7993 | 1165.6072 | 583.3073 | K | 2463.1899 | 1232.0986 | 2446.1633 | 1223.5853 | 2445.1793 | 1223.0933 | 18 |
| 7 | 1296.7019 | 648.8546 | 1279.6753 | 640.3413 | 1278.6913 | 639.8493 | L | 1877.9028 | 939.4550 | 1860.8763 | 930.9418 | 1859.8923 | 930.4498 | 17 |
| 8 | 1383.7339 | 692.3706 | 1366.7074 | 683.8573 | 1365.7233 | 683.3653 | S | 1764.8188 | 882.9130 | 1747.7922 | 874.3997 | 1746.8082 | 873.9077 | 16 |
| 9 | 1480.7867 | 740.8970 | 1463.7601 | 732.3837 | 1462.7761 | 731.8917 | P | 1677.7867 | 839.3970 | 1660.7602 | 830.8837 | 1659.7762 | 830.3917 | 15 |
| 10 | 1577.8394 | 789.4234 | 1560.8129 | 780.9101 | 1559.8289 | 780.4181 | P | 1580.7340 | 790.8706 | 1563.7074 | 782.3573 | 1562.7234 | 781.8653 | 14 |
| 11 | 1740.9028 | 870.9550 | 1723.8762 | 862.4417 | 1722.8922 | 861.9497 | Y | 1483.6812 | 742.3442 | 1466.6547 | 733.8310 | 1465.6706 | 733.3390 | 13 |
| 12 | 1827.9348 | 914.4710 | 1810.9082 | 905.9578 | 1809.9242 | 905.4657 | S | 1320.6179 | 660.8126 | 1303.5913 | 652.2993 | 1302.6073 | 651.8073 | 12 |
| 13 | 1914.9668 | 957.9870 | 1897.9403 | 949.4738 | 1896.9563 | 948.9818 | S | 1233.5858 | 617.2966 | 1216.5593 | 608.7833 | 1215.5753 | 608.2913 | 11 |
| 14 | 2012.0196 | 1006.5134 | 1994.9930 | 998.0002 | 1994.0090 | 997.5081 | P | 1146.5538 | 573.7805 | 1129.5273 | 565.2673 | 1128.5432 | 564.7753 | 10 |
| 15 | 2140.0782 | 1070.5427 | 2123.0516 | 1062.0294 | 2122.0676 | 1061.5374 | Q | 1049.5011 | 525.2542 | 1032.4745 | 516.7409 | 1031.4905 | 516.2489 | 9 |
| 16 | 2269.1208 | 1135.0640 | 2252.0942 | 1126.5507 | 2251.1102 | 1126.0587 | E | 921.4425 | 461.2249 | 904.4159 | 452.7116 | 903.4319 | 452.2196 | 8 |
| 17 | 2416.1892 | 1208.5982 | 2399.1626 | 1200.0849 | 2398.1786 | 1199.5929 | F | 792.3999 | 396.7036 | 775.3733 | 388.1903 | 774.3893 | 387.6983 | 7 |
| 18 | 2487.2263 | 1244.1168 | 2470.1997 | 1235.6035 | 2469.2157 | 1235.1115 | A | 645.3315 | 323.1694 | 628.3049 | 314.6561 | 627.3209 | 314.1641 | 6 |
| 19 | 2615.2849 | 1308.1461 | 2598.2583 | 1299.6328 | 2597.2743 | 1299.1408 | Q | 574.2944 | 287.6508 | 557.2678 | 279.1375 | 556.2838 | 278.6455 | 5 |
| 20 | 2730.3118 | 1365.6595 | 2713.2853 | 1357.1463 | 2712.3012 | 1356.6543 | D | 446.2358 | 223.6215 | 429.2092 | 215.1082 | 428.2252 | 214.6162 | 4 |
| 21 | 2829.3802 | 1415.1937 | 2812.3537 | 1406.6805 | 2811.3696 | 1406.1885 | V | 331.2088 | 166.1081 | 314.1823 | 157.5948 | | | 3 |
| 22 | 2886.4017 | 1443.7045 | 2869.3751 | 1435.1912 | 2868.3911 | 1434.6992 | G | 232.1404 | 116.5738 | 215.1139 | 108.0606 | | | 2 |
| 23 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 32

MS/MS Fragmentation of **EGVKTENDHNLK**

Found in **P55854**, Small ubiquitin-related modifier 3 OS=Homo sapiens GN=SUMO3 PE=1 SV=2



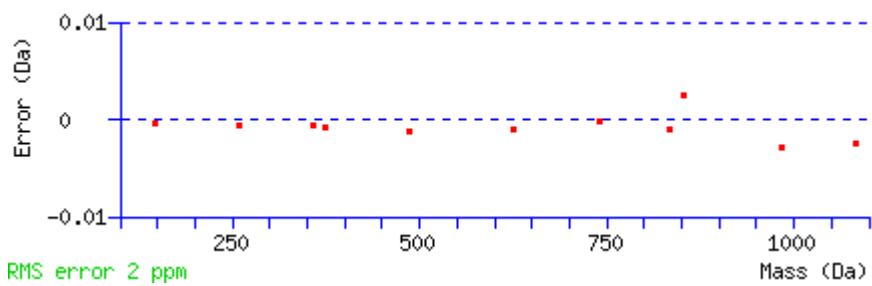
Monoisotopic mass of neutral peptide Mr(calc): 1952.9552

Variable modifications:

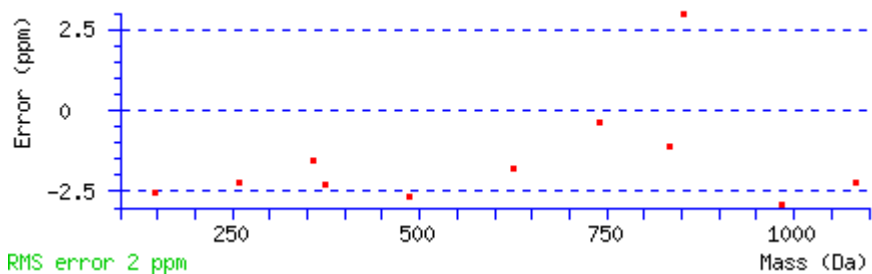
K4 : Sumo 3 (K)

Ions Score: 37 Expect: 0.34

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 130.0499 | 65.5286 | | | 112.0393 | 56.5233 | E | | | | | | | 13 |
| 2 | 187.0713 | 94.0393 | | | 169.0608 | 85.0340 | G | 1824.9199 | 912.9636 | 1807.8933 | 904.4503 | 1806.9093 | 903.9583 | 12 |
| 3 | 286.1397 | 143.5735 | | | 268.1292 | 134.5682 | V | 1767.8984 | 884.4528 | 1750.8719 | 875.9396 | 1749.8878 | 875.4476 | 11 |
| 4 | 871.4268 | 436.2170 | 854.4003 | 427.7038 | 853.4163 | 427.2118 | K | 1668.8300 | 834.9186 | 1651.8034 | 826.4054 | 1650.8194 | 825.9133 | 10 |
| 5 | 972.4745 | 486.7409 | 955.4480 | 478.2276 | 954.4639 | 477.7356 | T | 1083.5429 | 542.2751 | 1066.5164 | 533.7618 | 1065.5323 | 533.2698 | 9 |
| 6 | 1101.5171 | 551.2622 | 1084.4905 | 542.7489 | 1083.5065 | 542.2569 | E | 982.4952 | 491.7513 | 965.4687 | 483.2380 | 964.4847 | 482.7460 | 8 |
| 7 | 1215.5600 | 608.2836 | 1198.5335 | 599.7704 | 1197.5495 | 599.2784 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 8 | 1330.5870 | 665.7971 | 1313.5604 | 657.2838 | 1312.5764 | 656.7918 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 9 | 1467.6459 | 734.3266 | 1450.6193 | 725.8133 | 1449.6353 | 725.3213 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 10 | 1580.7299 | 790.8686 | 1563.7034 | 782.3553 | 1562.7194 | 781.8633 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 11 | 1694.7729 | 847.8901 | 1677.7463 | 839.3768 | 1676.7623 | 838.8848 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 12 | 1807.8569 | 904.4321 | 1790.8304 | 895.9188 | 1789.8464 | 895.4268 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 13 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



RMS error 2 ppm

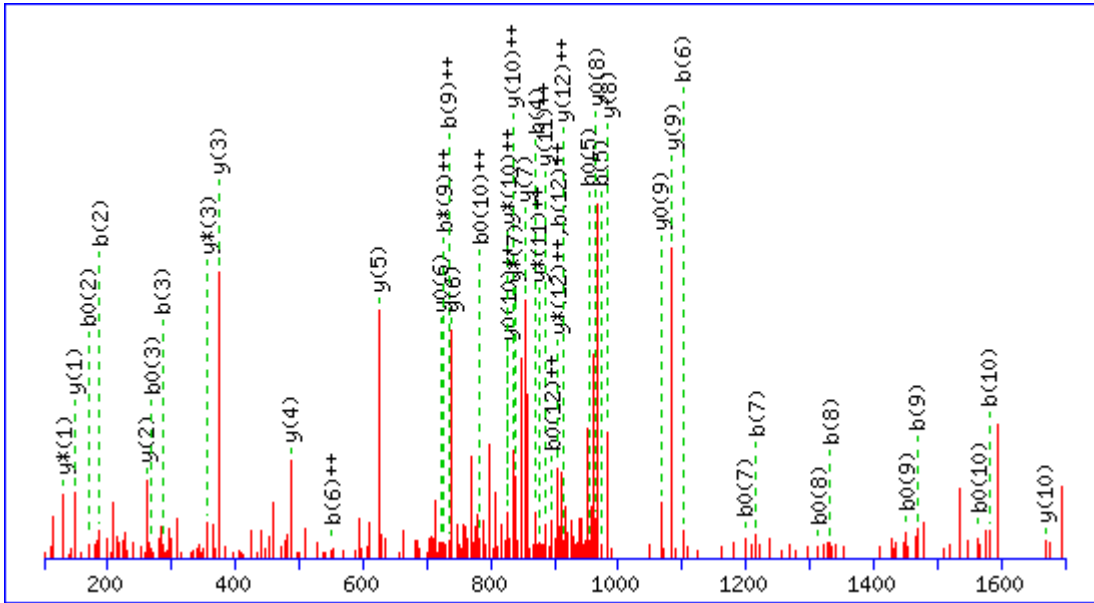


RMS error 2 ppm

IDENTIFICATION 33

MS/MS Fragmentation of **EGVKTENDHNLK**

Found in **P55854**, Small ubiquitin-related modifier 3 OS=Homo sapiens GN=SUMO3 PE=1 SV=2



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1953.9392

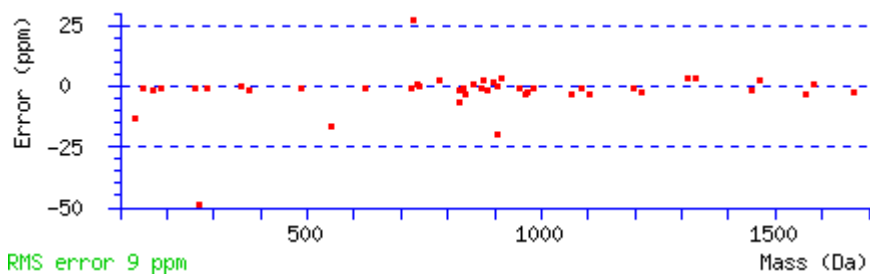
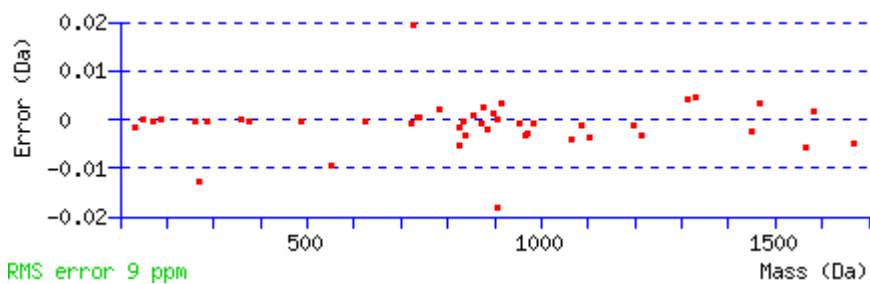
Variable modifications:

K4 : Sumo 3 (K)

N7 : Deamidated (NQ)

Ions Score: 59 Expect: 0.0023

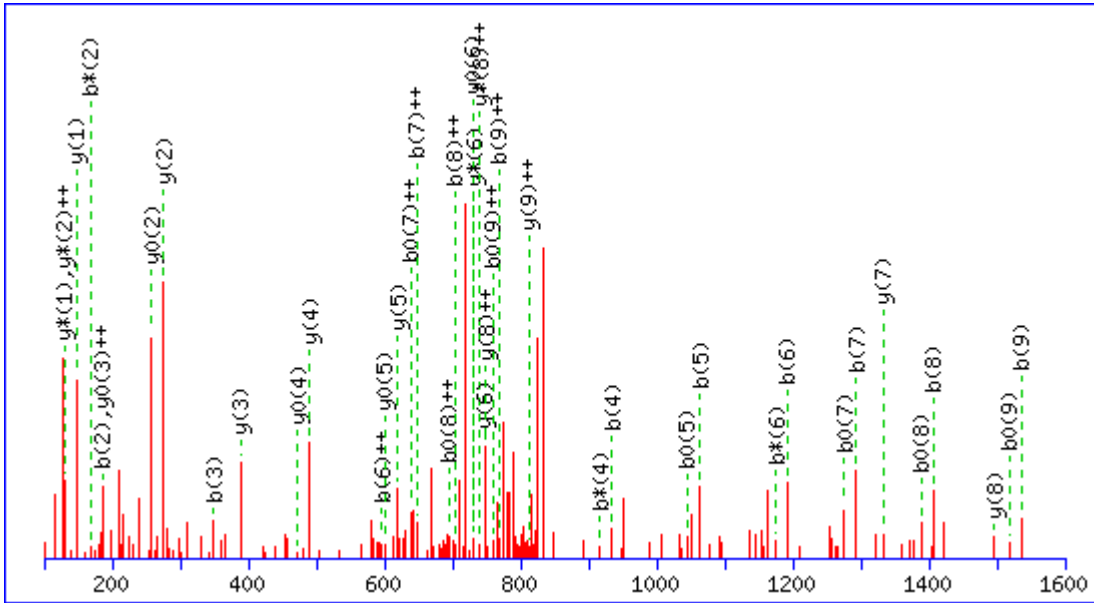
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 130.0499 | 65.5286 | | | 112.0393 | 56.5233 | E | | | | | | | 13 |
| 2 | 187.0713 | 94.0393 | | | 169.0608 | 85.0340 | G | 1825.9039 | 913.4556 | 1808.8773 | 904.9423 | 1807.8933 | 904.4503 | 12 |
| 3 | 286.1397 | 143.5735 | | | 268.1292 | 134.5682 | V | 1768.8824 | 884.9448 | 1751.8559 | 876.4316 | 1750.8719 | 875.9396 | 11 |
| 4 | 871.4268 | 436.2170 | 854.4003 | 427.7038 | 853.4163 | 427.2118 | K | 1669.8140 | 835.4106 | 1652.7875 | 826.8974 | 1651.8034 | 826.4054 | 10 |
| 5 | 972.4745 | 486.7409 | 955.4480 | 478.2276 | 954.4639 | 477.7356 | T | 1084.5269 | 542.7671 | 1067.5004 | 534.2538 | 1066.5164 | 533.7618 | 9 |
| 6 | 1101.5171 | 551.2622 | 1084.4905 | 542.7489 | 1083.5065 | 542.2569 | E | 983.4793 | 492.2433 | 966.4527 | 483.7300 | 965.4687 | 483.2380 | 8 |
| 7 | 1216.5440 | 608.7757 | 1199.5175 | 600.2624 | 1198.5335 | 599.7704 | N | 854.4367 | 427.7220 | 837.4101 | 419.2087 | 836.4261 | 418.7167 | 7 |
| 8 | 1331.5710 | 666.2891 | 1314.5444 | 657.7759 | 1313.5604 | 657.2838 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 9 | 1468.6299 | 734.8186 | 1451.6033 | 726.3053 | 1450.6193 | 725.8133 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 10 | 1581.7140 | 791.3606 | 1564.6874 | 782.8473 | 1563.7034 | 782.3553 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 11 | 1695.7569 | 848.3821 | 1678.7303 | 839.8688 | 1677.7463 | 839.3768 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 12 | 1808.8409 | 904.9241 | 1791.8144 | 896.4108 | 1790.8304 | 895.9188 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 13 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 34

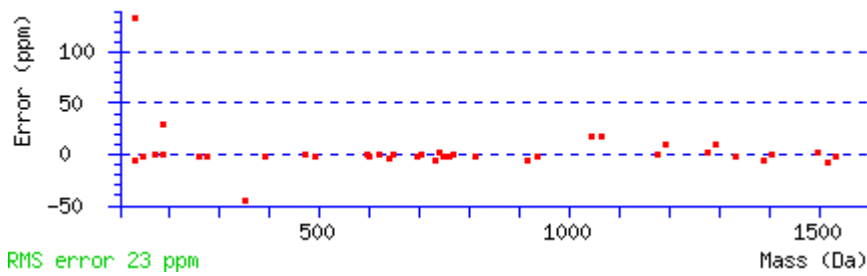
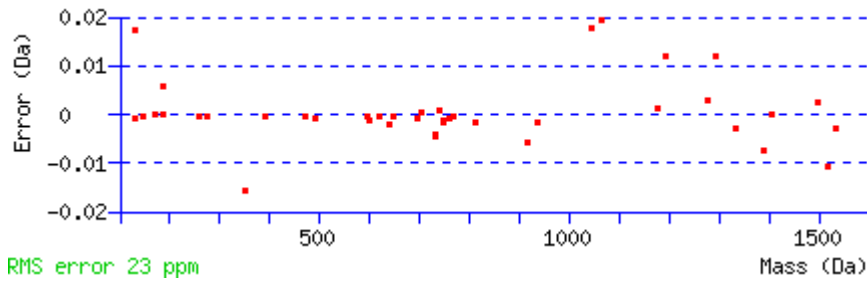
MS/MS Fragmentation of **GKYKEETIEK**

Found in **P61254**, 60S ribosomal protein L26 OS=Homo sapiens GN=RPL26 PE=1 SV=1



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1680.8318 Variable modifications: K4 : Sumo 3 (K) Ions Score: 39 Expect: 0.14

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 58.0287 | 29.5180 | | | | | G | | | | | | | 10 |
| 2 | 186.1237 | 93.5655 | 169.0972 | 85.0522 | | | K | 1624.8177 | 812.9125 | 1607.7911 | 804.3992 | 1606.8071 | 803.9072 | 9 |
| 3 | 349.1870 | 175.0972 | 332.1605 | 166.5839 | | | Y | 1496.7227 | 748.8650 | 1479.6962 | 740.3517 | 1478.7122 | 739.8597 | 8 |
| 4 | 934.4741 | 467.7407 | 917.4476 | 459.2274 | | | K | 1333.6594 | 667.3333 | 1316.6329 | 658.8201 | 1315.6488 | 658.3281 | 7 |
| 5 | 1063.5167 | 532.2620 | 1046.4902 | 523.7487 | 1045.5061 | 523.2567 | E | 748.3723 | 374.6898 | 731.3458 | 366.1765 | 730.3618 | 365.6845 | 6 |
| 6 | 1192.5593 | 596.7833 | 1175.5327 | 588.2700 | 1174.5487 | 587.7780 | E | 619.3297 | 310.1685 | 602.3032 | 301.6552 | 601.3192 | 301.1632 | 5 |
| 7 | 1293.6070 | 647.3071 | 1276.5804 | 638.7938 | 1275.5964 | 638.3018 | T | 490.2871 | 245.6472 | 473.2606 | 237.1339 | 472.2766 | 236.6419 | 4 |
| 8 | 1406.6910 | 703.8492 | 1389.6645 | 695.3359 | 1388.6805 | 694.8439 | I | 389.2395 | 195.1234 | 372.2129 | 186.6101 | 371.2289 | 186.1181 | 3 |
| 9 | 1535.7336 | 768.3705 | 1518.7071 | 759.8572 | 1517.7231 | 759.3652 | E | 276.1554 | 138.5813 | 259.1288 | 130.0681 | 258.1448 | 129.5761 | 2 |
| 10 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |

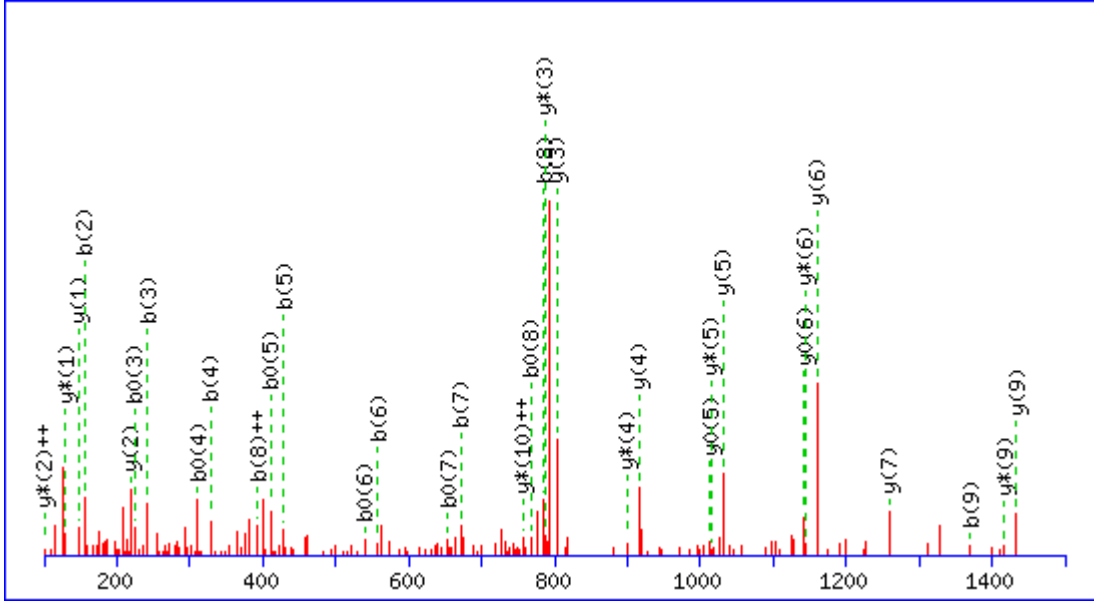


IDENTIFICATION 35

MS/MS Fragmentation of

GPSSVEDIKAK

Found in P06748, Nucleophosmin OS=Homo sapiens GN=NPM1 PE=1 SV=2



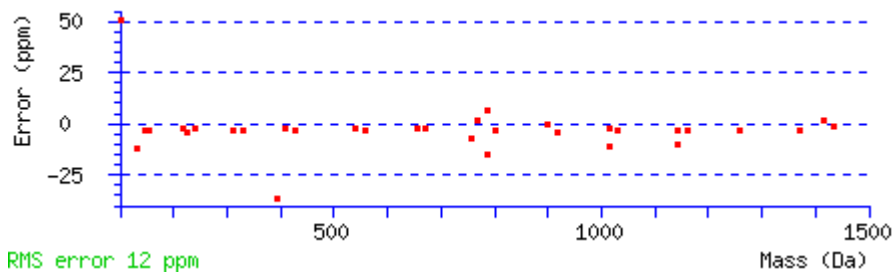
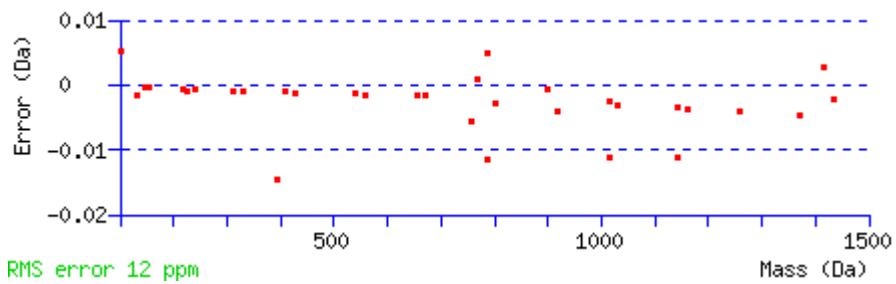
Monoisotopic mass of neutral peptide Mr(calc): 1586.7900

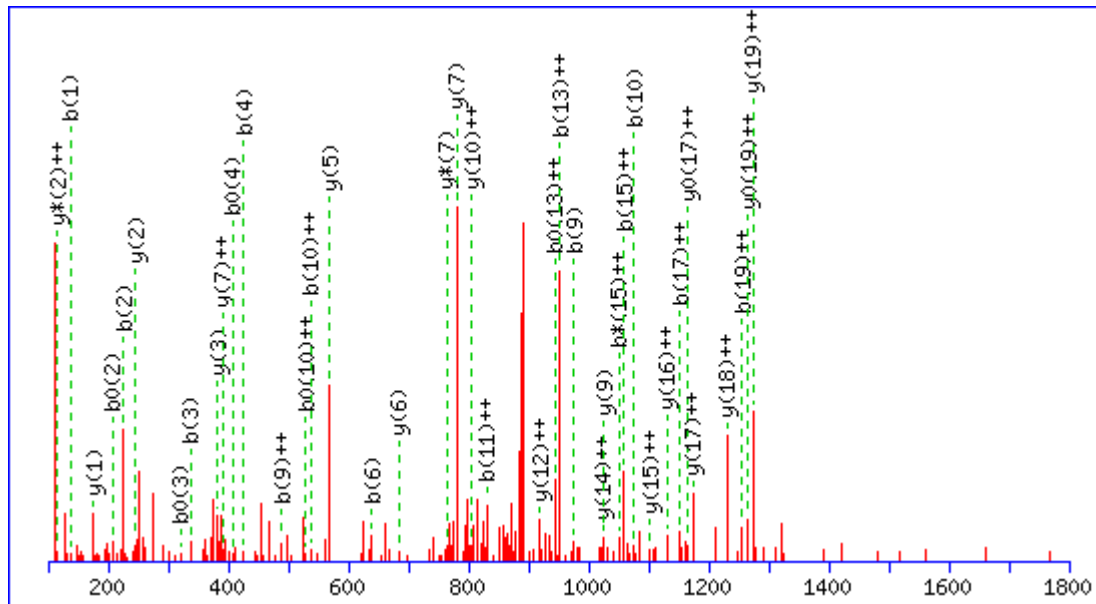
Variable modifications:

K9 : Sumo 3 (K)

Ions Score: 50 Expect: 0.013

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 58.0287 | 29.5180 | | | | | G | | | | | | | 11 |
| 2 | 155.0815 | 78.0444 | | | | | P | 1530.7758 | 765.8916 | 1513.7493 | 757.3783 | 1512.7653 | 756.8863 | 10 |
| 3 | 242.1135 | 121.5604 | | | 224.1030 | 112.5551 | S | 1433.7231 | 717.3652 | 1416.6965 | 708.8519 | 1415.7125 | 708.3599 | 9 |
| 4 | 329.1456 | 165.0764 | | | 311.1350 | 156.0711 | S | 1346.6910 | 673.8492 | 1329.6645 | 665.3359 | 1328.6805 | 664.8439 | 8 |
| 5 | 428.2140 | 214.6106 | | | 410.2034 | 205.6053 | V | 1259.6590 | 630.3331 | 1242.6325 | 621.8199 | 1241.6484 | 621.3279 | 7 |
| 6 | 557.2566 | 279.1319 | | | 539.2460 | 270.1266 | E | 1160.5906 | 580.7989 | 1143.5640 | 572.2857 | 1142.5800 | 571.7937 | 6 |
| 7 | 672.2835 | 336.6454 | | | 654.2729 | 327.6401 | D | 1031.5480 | 516.2776 | 1014.5215 | 507.7644 | 1013.5374 | 507.2724 | 5 |
| 8 | 785.3676 | 393.1874 | | | 767.3570 | 384.1821 | I | 916.5211 | 458.7642 | 899.4945 | 450.2509 | | | 4 |
| 9 | 1370.6546 | 685.8310 | 1353.6281 | 677.3177 | 1352.6441 | 676.8257 | K | 803.4370 | 402.2221 | 786.4104 | 393.7089 | | | 3 |
| 10 | 1441.6918 | 721.3495 | 1424.6652 | 712.8362 | 1423.6812 | 712.3442 | A | 218.1499 | 109.5786 | 201.1234 | 101.0653 | | | 2 |
| 11 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



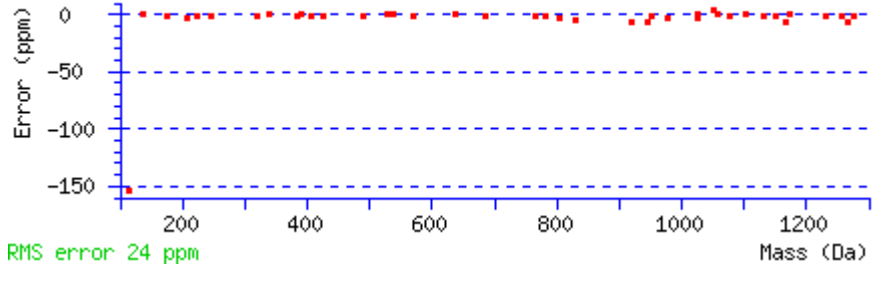
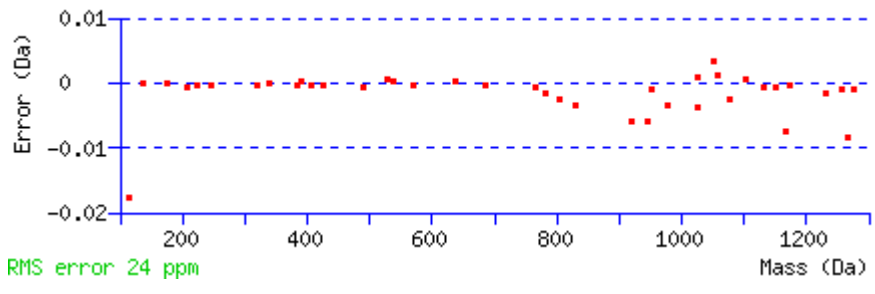
MS/MS Fragmentation of **HLSGRPLKVKEDPDGEHAR**Found in **P52272**, Heterogeneous nuclear ribonucleoprotein M OS=Homo sapiens GN=HNRNPM PE=1 SV=3Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2684.3379

Variable modifications:

K11 : Sumo 3 (K)

Ions Score: 16 Expect: 51

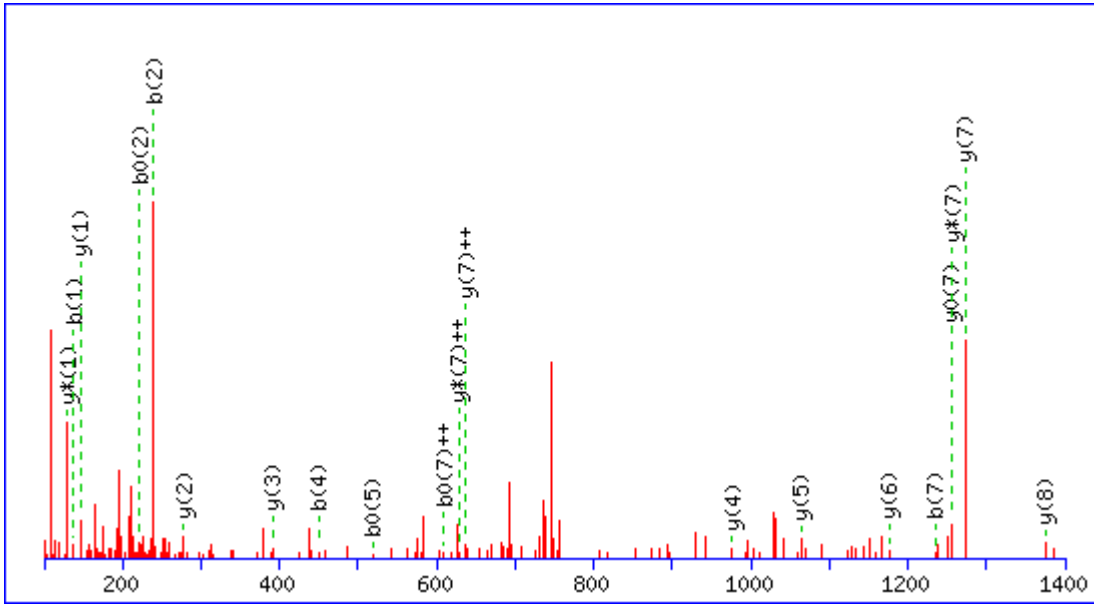
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ^{*++} | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 138.0662 | 69.5367 | | | | | H | | | | | | | 20 |
| 2 | 225.0982 | 113.0527 | | | 207.0877 | 104.0475 | S | 2548.2863 | 1274.6468 | 2531.2597 | 1266.1335 | 2530.2757 | 1265.6415 | 19 |
| 3 | 338.1823 | 169.5948 | | | 320.1717 | 160.5895 | L | 2461.2542 | 1231.1307 | 2444.2277 | 1222.6175 | 2443.2437 | 1222.1255 | 18 |
| 4 | 425.2143 | 213.1108 | | | 407.2037 | 204.1055 | S | 2348.1702 | 1174.5887 | 2331.1436 | 1166.0754 | 2330.1596 | 1165.5834 | 17 |
| 5 | 482.2358 | 241.6215 | | | 464.2252 | 232.6162 | G | 2261.1381 | 1131.0727 | 2244.1116 | 1122.5594 | 2243.1276 | 1122.0674 | 16 |
| 6 | 638.3369 | 319.6721 | 621.3103 | 311.1588 | 620.3263 | 310.6668 | R | 2204.1167 | 1102.5620 | 2187.0901 | 1094.0487 | 2186.1061 | 1093.5567 | 15 |
| 7 | 735.3896 | 368.1985 | 718.3631 | 359.6852 | 717.3791 | 359.1932 | P | 2048.0156 | 1024.5114 | 2030.9890 | 1015.9981 | 2030.0050 | 1015.5061 | 14 |
| 8 | 848.4737 | 424.7405 | 831.4472 | 416.2272 | 830.4631 | 415.7352 | L | 1950.9628 | 975.9850 | 1933.9362 | 967.4718 | 1932.9522 | 966.9798 | 13 |
| 9 | 976.5687 | 488.7880 | 959.5421 | 480.2747 | 958.5581 | 479.7827 | K | 1837.8787 | 919.4430 | 1820.8522 | 910.9297 | 1819.8682 | 910.4377 | 12 |
| 10 | 1075.6371 | 538.3222 | 1058.6105 | 529.8089 | 1057.6265 | 529.3169 | V | 1709.7838 | 855.3955 | 1692.7572 | 846.8822 | 1691.7732 | 846.3902 | 11 |
| 11 | 1660.9242 | 830.9657 | 1643.8976 | 822.4524 | 1642.9136 | 821.9604 | K | 1610.7154 | 805.8613 | 1593.6888 | 797.3480 | 1592.7048 | 796.8560 | 10 |
| 12 | 1789.9668 | 895.4870 | 1772.9402 | 886.9737 | 1771.9562 | 886.4817 | E | 1025.4283 | 513.2178 | 1008.4017 | 504.7045 | 1007.4177 | 504.2125 | 9 |
| 13 | 1904.9937 | 953.0005 | 1887.9671 | 944.4872 | 1886.9831 | 943.9952 | D | 896.3857 | 448.6965 | 879.3591 | 440.1832 | 878.3751 | 439.6912 | 8 |
| 14 | 2002.0465 | 1001.5269 | 1985.0199 | 993.0136 | 1984.0359 | 992.5216 | P | 781.3587 | 391.1830 | 764.3322 | 382.6697 | 763.3482 | 382.1777 | 7 |
| 15 | 2117.0734 | 1059.0403 | 2100.0469 | 1050.5271 | 2099.0628 | 1050.0351 | D | 684.3060 | 342.6566 | 667.2794 | 334.1434 | 666.2954 | 333.6513 | 6 |
| 16 | 2174.0949 | 1087.5511 | 2157.0683 | 1079.0378 | 2156.0843 | 1078.5458 | G | 569.2790 | 285.1432 | 552.2525 | 276.6299 | 551.2685 | 276.1379 | 5 |
| 17 | 2303.1375 | 1152.0724 | 2286.1109 | 1143.5591 | 2285.1269 | 1143.0671 | E | 512.2576 | 256.6324 | 495.2310 | 248.1191 | 494.2470 | 247.6271 | 4 |
| 18 | 2440.1964 | 1220.6018 | 2423.1698 | 1212.0886 | 2422.1858 | 1211.5965 | H | 383.2150 | 192.1111 | 366.1884 | 183.5979 | | | 3 |
| 19 | 2511.2335 | 1256.1204 | 2494.2069 | 1247.6071 | 2493.2229 | 1247.1151 | A | 246.1561 | 123.5817 | 229.1295 | 115.0684 | | | 2 |
| 20 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 37

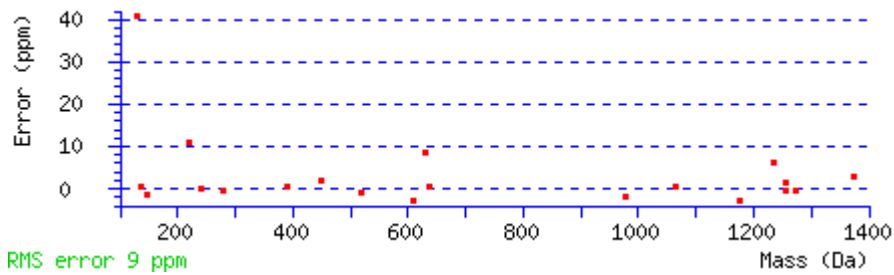
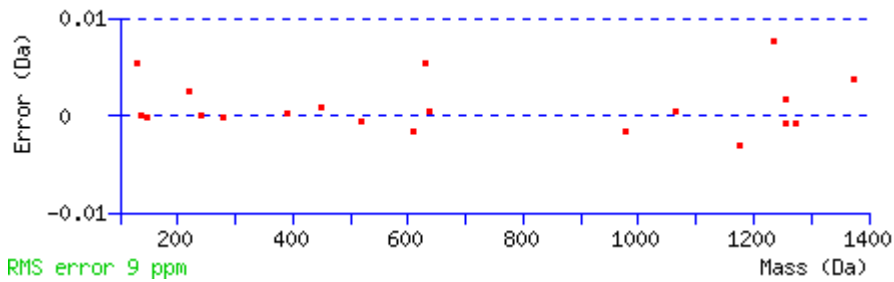
MS/MS Fragmentation of **HTPLSKLMK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1510.7926 Variable modifications: K6 : Sumo 3 (K) Ions Score: 16 Expect: 14

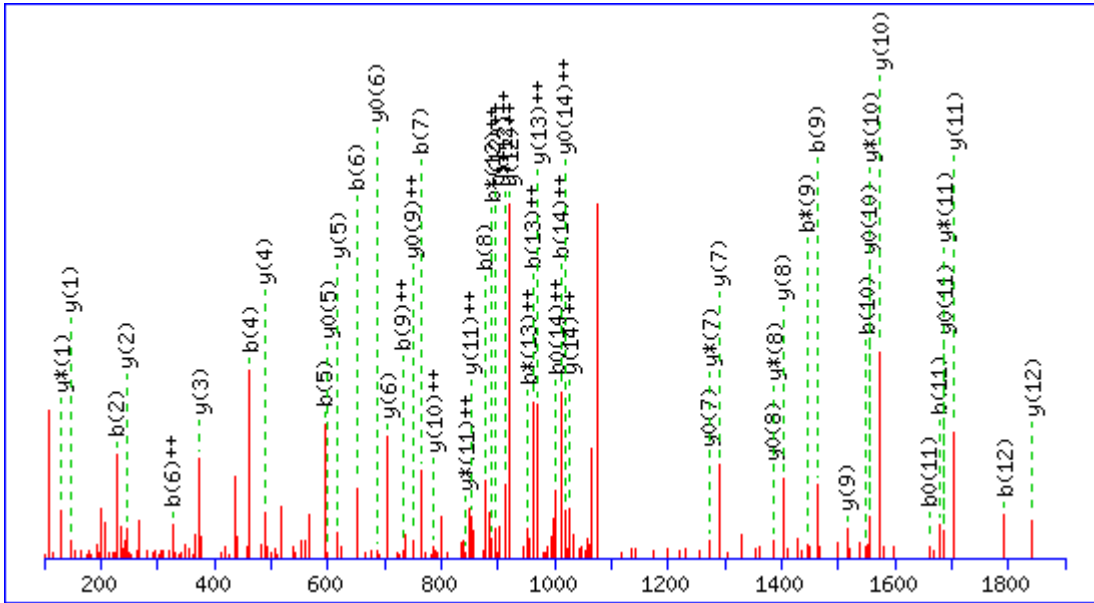
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|---|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|---|
| 1 | 138.0662 | 69.5367 | | | | | H | | | | | | | 9 |
| 2 | 239.1139 | 120.0606 | | | 221.1033 | 111.0553 | T | 1374.7410 | 687.8741 | 1357.7144 | 679.3608 | 1356.7304 | 678.8688 | 8 |
| 3 | 336.1666 | 168.5870 | | | 318.1561 | 159.5817 | P | 1273.6933 | 637.3503 | 1256.6667 | 628.8370 | 1255.6827 | 628.3450 | 7 |
| 4 | 449.2507 | 225.1290 | | | 431.2401 | 216.1237 | L | 1176.6405 | 588.8239 | 1159.6140 | 580.3106 | 1158.6300 | 579.8186 | 6 |
| 5 | 536.2827 | 268.6450 | | | 518.2722 | 259.6397 | S | 1063.5565 | 532.2819 | 1046.5299 | 523.7686 | 1045.5459 | 523.2766 | 5 |
| 6 | 1121.5698 | 561.2885 | 1104.5432 | 552.7753 | 1103.5592 | 552.2833 | K | 976.5244 | 488.7659 | 959.4979 | 480.2526 | | | 4 |
| 7 | 1234.6539 | 617.8306 | 1217.6273 | 609.3173 | 1216.6433 | 608.8253 | L | 391.2374 | 196.1223 | 374.2108 | 187.6090 | | | 3 |
| 8 | 1365.6943 | 683.3508 | 1348.6678 | 674.8375 | 1347.6838 | 674.3455 | M | 278.1533 | 139.5803 | 261.1267 | 131.0670 | | | 2 |
| 9 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 38

MS/MS Fragmentation of **LLVHMGLLKSEDKVK**

Found in **P46060**, Ran GTPase-activating protein 1 OS=Homo sapiens GN=RANGAP1 PE=1 SV=1



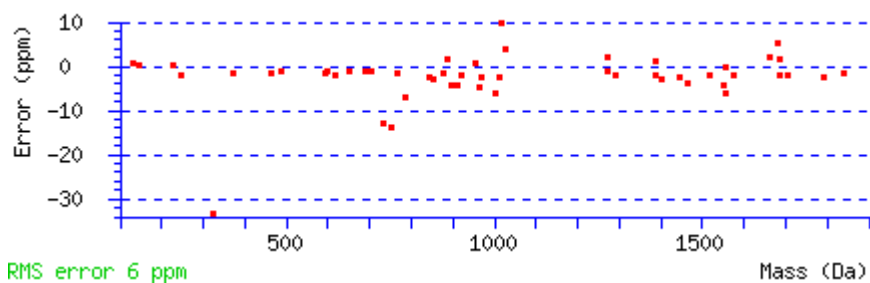
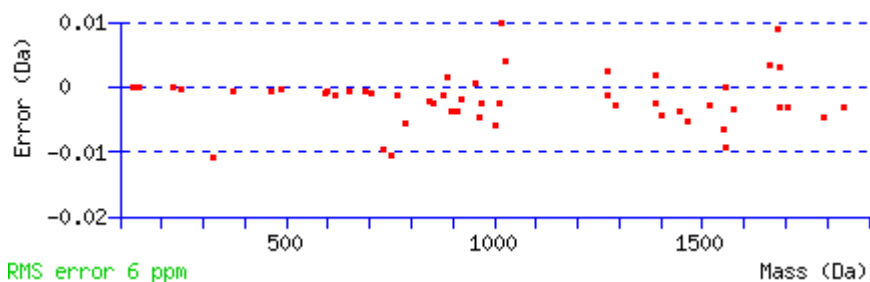
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2166.1830

Variable modifications:

K9 : Sumo 3 (K)

Ions Score: 66 Expect: 7.2e-05

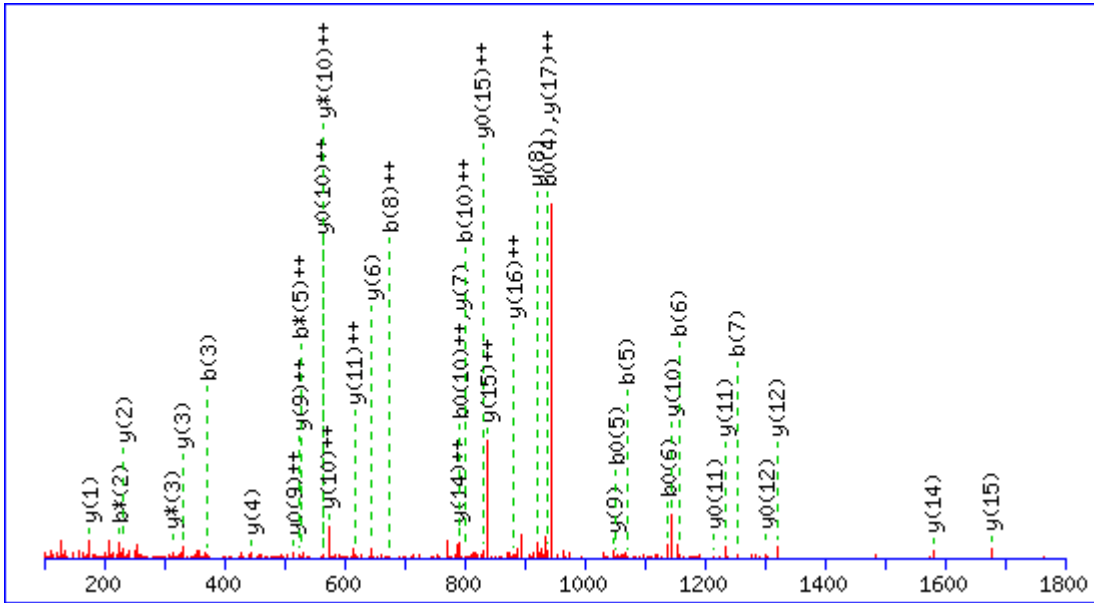
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0913 | 57.5493 | | | | | L | | | | | | | 15 |
| 2 | 227.1754 | 114.0913 | | | | | L | 2054.1063 | 1027.5568 | 2037.0797 | 1019.0435 | 2036.0957 | 1018.5515 | 14 |
| 3 | 326.2438 | 163.6255 | | | | | V | 1941.0222 | 971.0147 | 1923.9957 | 962.5015 | 1923.0117 | 962.0095 | 13 |
| 4 | 463.3027 | 232.1550 | | | | | H | 1841.9538 | 921.4805 | 1824.9273 | 912.9673 | 1823.9432 | 912.4753 | 12 |
| 5 | 594.3432 | 297.6752 | | | | | M | 1704.8949 | 852.9511 | 1687.8683 | 844.4378 | 1686.8843 | 843.9458 | 11 |
| 6 | 651.3647 | 326.1860 | | | | | G | 1573.8544 | 787.4308 | 1556.8279 | 778.9176 | 1555.8438 | 778.4256 | 10 |
| 7 | 764.4487 | 382.7280 | | | | | L | 1516.8329 | 758.9201 | 1499.8064 | 750.4068 | 1498.8224 | 749.9148 | 9 |
| 8 | 877.5328 | 439.2700 | | | | | L | 1403.7489 | 702.3781 | 1386.7223 | 693.8648 | 1385.7383 | 693.3728 | 8 |
| 9 | 1462.8199 | 731.9136 | 1445.7933 | 723.4003 | | | K | 1290.6648 | 645.8360 | 1273.6383 | 637.3228 | 1272.6543 | 636.8308 | 7 |
| 10 | 1549.8519 | 775.4296 | 1532.8254 | 766.9163 | 1531.8413 | 766.4243 | S | 705.3777 | 353.1925 | 688.3512 | 344.6792 | 687.3672 | 344.1872 | 6 |
| 11 | 1678.8945 | 839.9509 | 1661.8680 | 831.4376 | 1660.8839 | 830.9456 | E | 618.3457 | 309.6765 | 601.3192 | 301.1632 | 600.3352 | 300.6712 | 5 |
| 12 | 1793.9214 | 897.4644 | 1776.8949 | 888.9511 | 1775.9109 | 888.4591 | D | 489.3031 | 245.1552 | 472.2766 | 236.6419 | 471.2926 | 236.1499 | 4 |
| 13 | 1922.0164 | 961.5118 | 1904.9899 | 952.9986 | 1904.0058 | 952.5066 | K | 374.2762 | 187.6417 | 357.2496 | 179.1285 | | | 3 |
| 14 | 2021.0848 | 1011.0460 | 2004.0583 | 1002.5328 | 2003.0743 | 1002.0408 | V | 246.1812 | 123.5942 | 229.1547 | 115.0810 | | | 2 |
| 15 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 39

MS/MS Fragmentation of **LQEKLSPPYSSPQEFAQDVGR**

Found in **Q13263**, Transcription intermediary factor 1-beta OS=Homo sapiens GN=TRIM28 PE=1 SV=5



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2833.3518

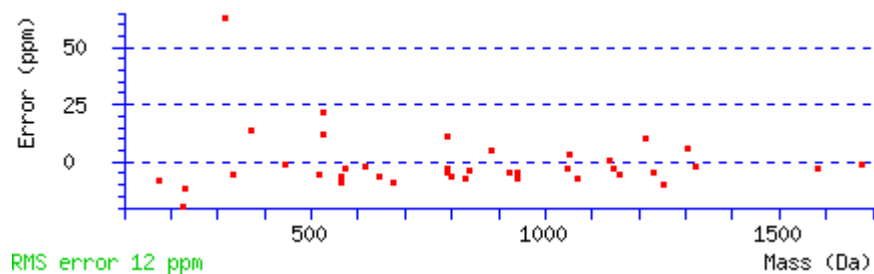
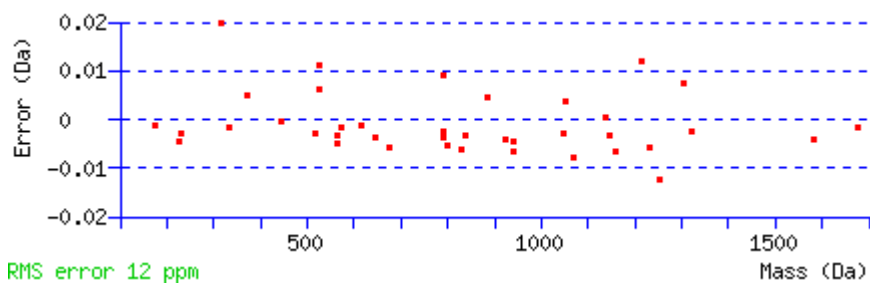
Variable modifications:

Q2 : Deamidated (NQ)

K4 : Sumo 3 (K)

Ions Score: 55 Expect: 0.012

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0913 | 57.5493 | | | | | L | | | | | | | 21 |
| 2 | 243.1339 | 122.0706 | 226.1074 | 113.5573 | | | Q | 2721.2751 | 1361.1412 | 2704.2485 | 1352.6279 | 2703.2645 | 1352.1359 | 20 |
| 3 | 372.1765 | 186.5919 | 355.1500 | 178.0786 | 354.1660 | 177.5866 | E | 2592.2325 | 1296.6199 | 2575.2059 | 1288.1066 | 2574.2219 | 1287.6146 | 19 |
| 4 | 957.4636 | 479.2354 | 940.4371 | 470.7222 | 939.4530 | 470.2302 | K | 2463.1899 | 1232.0986 | 2446.1633 | 1223.5853 | 2445.1793 | 1223.0933 | 18 |
| 5 | 1070.5477 | 535.7775 | 1053.5211 | 527.2642 | 1052.5371 | 526.7722 | L | 1877.9028 | 939.4550 | 1860.8763 | 930.9418 | 1859.8923 | 930.4498 | 17 |
| 6 | 1157.5797 | 579.2935 | 1140.5531 | 570.7802 | 1139.5691 | 570.2882 | S | 1764.8188 | 882.9130 | 1747.7922 | 874.3997 | 1746.8082 | 873.9077 | 16 |
| 7 | 1254.6325 | 627.8199 | 1237.6059 | 619.3066 | 1236.6219 | 618.8146 | P | 1677.7867 | 839.3970 | 1660.7602 | 830.8837 | 1659.7762 | 830.3917 | 15 |
| 8 | 1351.6852 | 676.3462 | 1334.6587 | 667.8330 | 1333.6747 | 667.3410 | P | 1580.7340 | 790.8706 | 1563.7074 | 782.3573 | 1562.7234 | 781.8653 | 14 |
| 9 | 1514.7486 | 757.8779 | 1497.7220 | 749.3646 | 1496.7380 | 748.8726 | Y | 1483.6812 | 742.3442 | 1466.6547 | 733.8310 | 1465.6706 | 733.3390 | 13 |
| 10 | 1601.7806 | 801.3939 | 1584.7540 | 792.8807 | 1583.7700 | 792.3886 | S | 1320.6179 | 660.8126 | 1303.5913 | 652.2993 | 1302.6073 | 651.8073 | 12 |
| 11 | 1688.8126 | 844.9099 | 1671.7861 | 836.3967 | 1670.8020 | 835.9047 | S | 1233.5858 | 617.2966 | 1216.5593 | 608.7833 | 1215.5753 | 608.2913 | 11 |
| 12 | 1785.8654 | 893.4363 | 1768.8388 | 884.9230 | 1767.8548 | 884.4310 | P | 1146.5538 | 573.7805 | 1129.5273 | 565.2673 | 1128.5432 | 564.7753 | 10 |
| 13 | 1913.9239 | 957.4656 | 1896.8974 | 948.9523 | 1895.9134 | 948.4603 | Q | 1049.5010 | 525.2542 | 1032.4745 | 516.7409 | 1031.4905 | 516.2489 | 9 |
| 14 | 2042.9665 | 1021.9869 | 2025.9400 | 1013.4736 | 2024.9560 | 1012.9816 | E | 921.4425 | 461.2249 | 904.4159 | 452.7116 | 903.4319 | 452.2196 | 8 |
| 15 | 2190.0350 | 1095.5211 | 2173.0084 | 1087.0078 | 2172.0244 | 1086.5158 | F | 792.3999 | 396.7036 | 775.3733 | 388.1903 | 774.3893 | 387.6983 | 7 |
| 16 | 2261.0721 | 1131.0397 | 2244.0455 | 1122.5264 | 2243.0615 | 1122.0344 | A | 645.3315 | 323.1694 | 628.3049 | 314.6561 | 627.3209 | 314.1641 | 6 |
| 17 | 2389.1306 | 1195.0690 | 2372.1041 | 1186.5557 | 2371.1201 | 1186.0637 | Q | 574.2944 | 287.6508 | 557.2678 | 279.1375 | 556.2838 | 278.6455 | 5 |
| 18 | 2504.1576 | 1252.5824 | 2487.1310 | 1244.0692 | 2486.1470 | 1243.5772 | D | 446.2358 | 223.6215 | 429.2092 | 215.1082 | 428.2252 | 214.6162 | 4 |
| 19 | 2603.2260 | 1302.1166 | 2586.1995 | 1293.6034 | 2585.2154 | 1293.1114 | V | 331.2088 | 166.1081 | 314.1823 | 157.5948 | | | 3 |
| 20 | 2660.2475 | 1330.6274 | 2643.2209 | 1322.1141 | 2642.2369 | 1321.6221 | G | 232.1404 | 116.5738 | 215.1139 | 108.0606 | | | 2 |
| 21 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



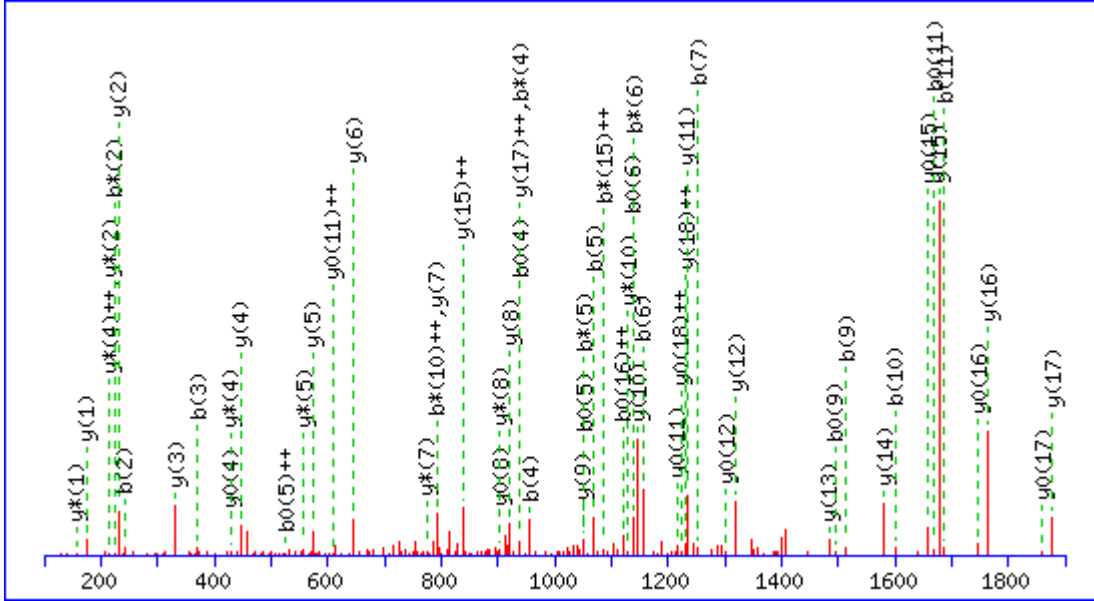
IDENTIFICATION 40

MS/MS Fragmentation of **LQEKLSPPYSSPQEFAQDVGR**

Found in

Q13263

, Transcription intermediary factor 1-beta OS=Homo sapiens GN=TRIM28 PE=1 SV=5



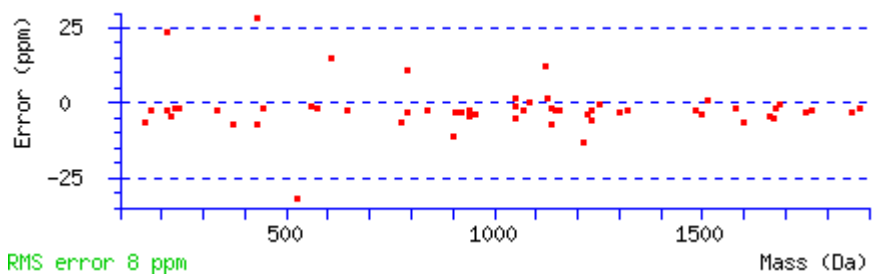
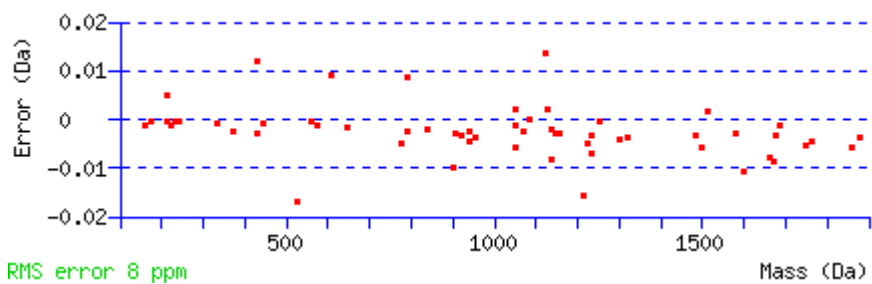
Monoisotopic mass of neutral peptide Mr(calc): 2832.3678

Variable modifications:

K4 : Sumo 3 (K)

Ions Score: 148 Expect: 5.7e-12

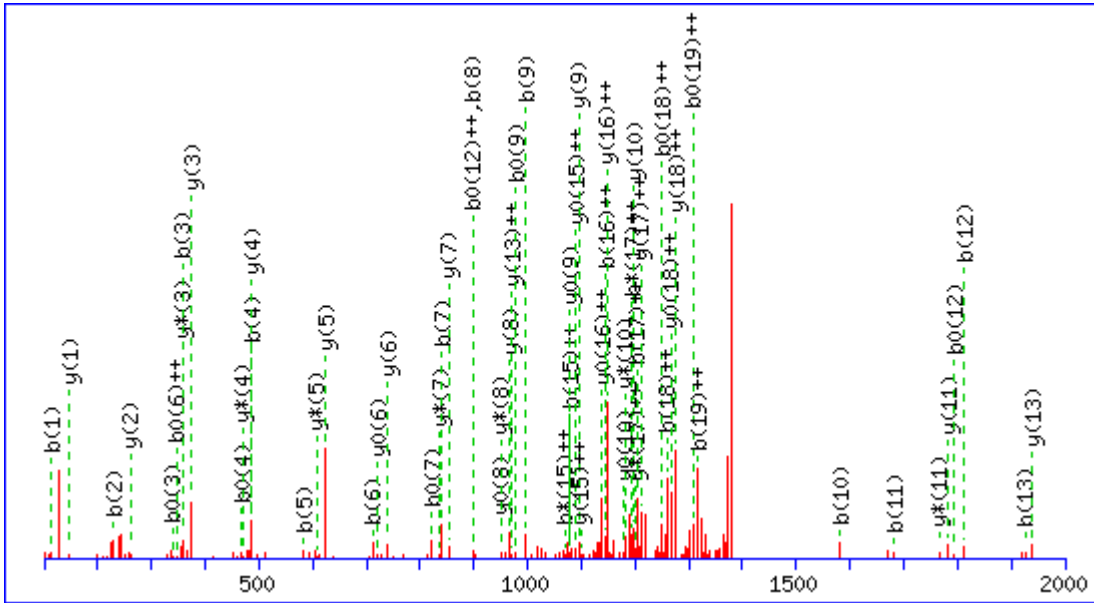
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0913 | 57.5493 | | | | | L | | | | | | | 21 |
| 2 | 242.1499 | 121.5786 | 225.1234 | 113.0653 | | | Q | 2720.2911 | 1360.6492 | 2703.2645 | 1352.1359 | 2702.2805 | 1351.6439 | 20 |
| 3 | 371.1925 | 186.0999 | 354.1660 | 177.5866 | 353.1819 | 177.0946 | E | 2592.2325 | 1296.6199 | 2575.2059 | 1288.1066 | 2574.2219 | 1287.6146 | 19 |
| 4 | 956.4796 | 478.7434 | 939.4530 | 470.2302 | 938.4690 | 469.7381 | K | 2463.1899 | 1232.0986 | 2446.1633 | 1223.5853 | 2445.1793 | 1223.0933 | 18 |
| 5 | 1069.5636 | 535.2855 | 1052.5371 | 526.7722 | 1051.5531 | 526.2802 | L | 1877.9028 | 939.4550 | 1860.8763 | 930.9418 | 1859.8923 | 930.4498 | 17 |
| 6 | 1156.5957 | 578.8015 | 1139.5691 | 570.2882 | 1138.5851 | 569.7962 | S | 1764.8188 | 882.9130 | 1747.7922 | 874.3997 | 1746.8082 | 873.9077 | 16 |
| 7 | 1253.6484 | 627.3279 | 1236.6219 | 618.8146 | 1235.6379 | 618.3226 | P | 1677.7867 | 839.3970 | 1660.7602 | 830.8837 | 1659.7762 | 830.3917 | 15 |
| 8 | 1350.7012 | 675.8542 | 1333.6747 | 667.3410 | 1332.6906 | 666.8490 | P | 1580.7340 | 790.8706 | 1563.7074 | 782.3573 | 1562.7234 | 781.8653 | 14 |
| 9 | 1513.7645 | 757.3859 | 1496.7380 | 748.8726 | 1495.7540 | 748.3806 | Y | 1483.6812 | 742.3442 | 1466.6547 | 733.8310 | 1465.6706 | 733.3390 | 13 |
| 10 | 1600.7966 | 800.9019 | 1583.7700 | 792.3886 | 1582.7860 | 791.8966 | S | 1320.6179 | 660.8126 | 1303.5913 | 652.2993 | 1302.6073 | 651.8073 | 12 |
| 11 | 1687.8286 | 844.4179 | 1670.8020 | 835.9047 | 1669.8180 | 835.4127 | S | 1233.5858 | 617.2966 | 1216.5593 | 608.7833 | 1215.5753 | 608.2913 | 11 |
| 12 | 1784.8814 | 892.9443 | 1767.8548 | 884.4310 | 1766.8708 | 883.9390 | P | 1146.5538 | 573.7805 | 1129.5273 | 565.2673 | 1128.5432 | 564.7753 | 10 |
| 13 | 1912.9399 | 956.9736 | 1895.9134 | 948.4603 | 1894.9294 | 947.9683 | Q | 1049.5011 | 525.2542 | 1032.4745 | 516.7409 | 1031.4905 | 516.2489 | 9 |
| 14 | 2041.9825 | 1021.4949 | 2024.9560 | 1012.9816 | 2023.9720 | 1012.4896 | E | 921.4425 | 461.2249 | 904.4159 | 452.7116 | 903.4319 | 452.2196 | 8 |
| 15 | 2189.0509 | 1095.0291 | 2172.0244 | 1086.5158 | 2171.0404 | 1086.0238 | F | 792.3999 | 396.7036 | 775.3733 | 388.1903 | 774.3893 | 387.6983 | 7 |
| 16 | 2260.0881 | 1130.5477 | 2243.0615 | 1122.0344 | 2242.0775 | 1121.5424 | A | 645.3315 | 323.1694 | 628.3049 | 314.6561 | 627.3209 | 314.1641 | 6 |
| 17 | 2388.1466 | 1194.5770 | 2371.1201 | 1186.0637 | 2370.1361 | 1185.5717 | Q | 574.2944 | 287.6508 | 557.2678 | 279.1375 | 556.2838 | 278.6455 | 5 |
| 18 | 2503.1736 | 1252.0904 | 2486.1470 | 1243.5772 | 2485.1630 | 1243.0851 | D | 446.2358 | 223.6215 | 429.2092 | 215.1082 | 428.2252 | 214.6162 | 4 |
| 19 | 2602.2420 | 1301.6246 | 2585.2154 | 1293.1114 | 2584.2314 | 1292.6193 | V | 331.2088 | 166.1081 | 314.1823 | 157.5948 | | | 3 |
| 20 | 2659.2635 | 1330.1354 | 2642.2369 | 1321.6221 | 2641.2529 | 1321.1301 | G | 232.1404 | 116.5738 | 215.1139 | 108.0606 | | | 2 |
| 21 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 25

MS/MS Fragmentation of **ADEKPKEGVKTENNDHILNK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2777.3580

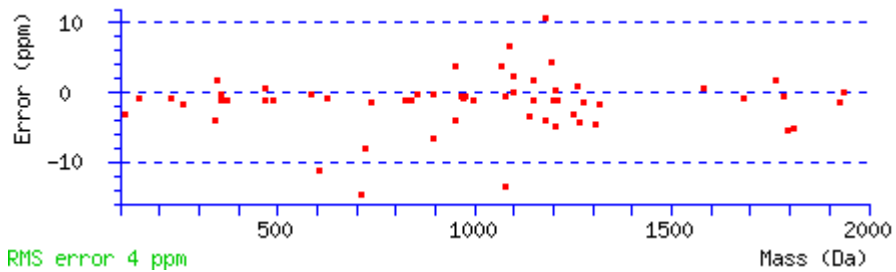
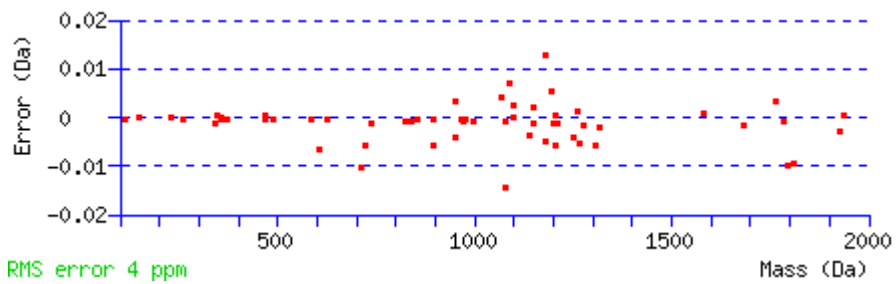
Variable modifications:

N-term : Acetyl (N-term)

K10 : Sumo 3 (K)

Ions Score: 92 Expect: 1.8e-06

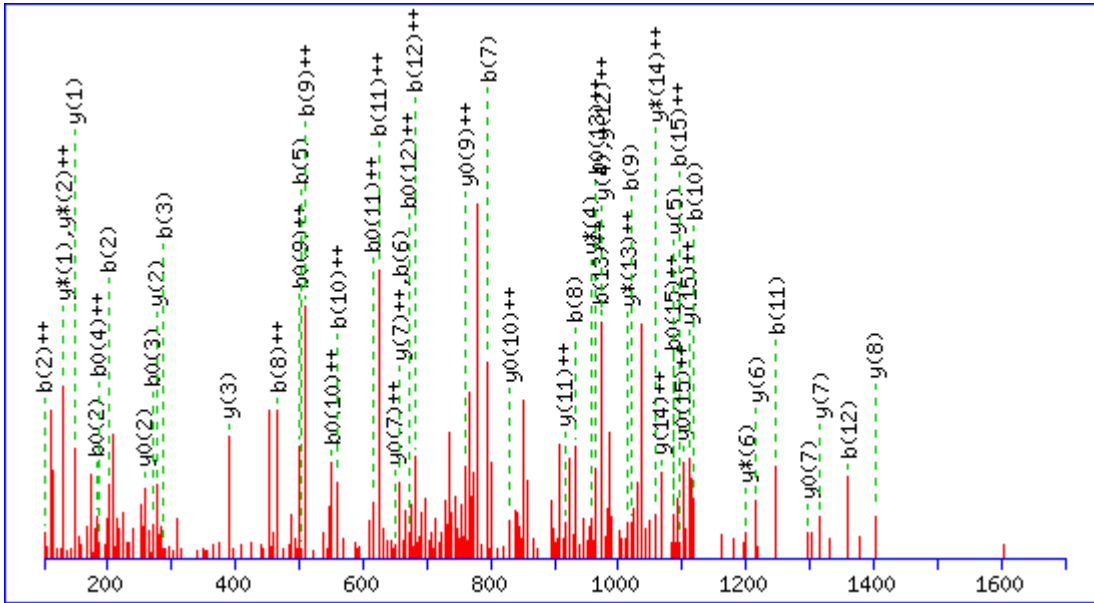
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2665.3176 | 1333.1624 | 2648.2911 | 1324.6492 | 2647.3070 | 1324.1572 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2550.2907 | 1275.6490 | 2533.2641 | 1267.1357 | 2532.2801 | 1266.6437 | 18 |
| 4 | 486.2195 | 243.6134 | 469.1929 | 235.1001 | 468.2089 | 234.6081 | K | 2421.2481 | 1211.1277 | 2404.2215 | 1202.6144 | 2403.2375 | 1202.1224 | 17 |
| 5 | 583.2722 | 292.1397 | 566.2457 | 283.6265 | 565.2617 | 283.1345 | P | 2293.1531 | 1147.0802 | 2276.1266 | 1138.5669 | 2275.1425 | 1138.0749 | 16 |
| 6 | 711.3672 | 356.1872 | 694.3406 | 347.6740 | 693.3566 | 347.1819 | K | 2196.1003 | 1098.5538 | 2179.0738 | 1090.0405 | 2178.0898 | 1089.5485 | 15 |
| 7 | 840.4098 | 420.7085 | 823.3832 | 412.1953 | 822.3992 | 411.7032 | E | 2068.0054 | 1034.5063 | 2050.9788 | 1025.9931 | 2049.9948 | 1025.5010 | 14 |
| 8 | 897.4312 | 449.2193 | 880.4047 | 440.7060 | 879.4207 | 440.2140 | G | 1938.9628 | 969.9850 | 1921.9362 | 961.4718 | 1920.9522 | 960.9798 | 13 |
| 9 | 996.4997 | 498.7535 | 979.4731 | 490.2402 | 978.4891 | 489.7482 | V | 1881.9413 | 941.4743 | 1864.9148 | 932.9610 | 1863.9308 | 932.4690 | 12 |
| 10 | 1581.7867 | 791.3970 | 1564.7602 | 782.8837 | 1563.7762 | 782.3917 | K | 1782.8729 | 891.9401 | 1765.8464 | 883.4268 | 1764.8623 | 882.9348 | 11 |
| 11 | 1682.8344 | 841.9208 | 1665.8079 | 833.4076 | 1664.8238 | 832.9156 | T | 1197.5858 | 599.2966 | 1180.5593 | 590.7833 | 1179.5753 | 590.2913 | 10 |
| 12 | 1811.8770 | 906.4421 | 1794.8504 | 897.9289 | 1793.8664 | 897.4369 | E | 1096.5382 | 548.7727 | 1079.5116 | 540.2594 | 1078.5276 | 539.7674 | 9 |
| 13 | 1925.9199 | 963.4636 | 1908.8934 | 954.9503 | 1907.9094 | 954.4583 | N | 967.4956 | 484.2514 | 950.4690 | 475.7381 | 949.4850 | 475.2461 | 8 |
| 14 | 2039.9629 | 1020.4851 | 2022.9363 | 1011.9718 | 2021.9523 | 1011.4798 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 15 | 2154.9898 | 1077.9985 | 2137.9632 | 1069.4853 | 2136.9792 | 1068.9933 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2292.0487 | 1146.5280 | 2275.0222 | 1138.0147 | 2274.0381 | 1137.5227 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2405.1328 | 1203.0700 | 2388.1062 | 1194.5567 | 2387.1222 | 1194.0647 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2519.1757 | 1260.0915 | 2502.1491 | 1251.5782 | 2501.1651 | 1251.0862 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2632.2598 | 1316.6335 | 2615.2332 | 1308.1202 | 2614.2492 | 1307.6282 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 41

MS/MS Fragmentation of **LSSVDRHHSVEIKIEK**

Found in **Q14151**, Scaffold attachment factor B2 OS=Homo sapiens GN=SAFB2 PE=1 SV=1



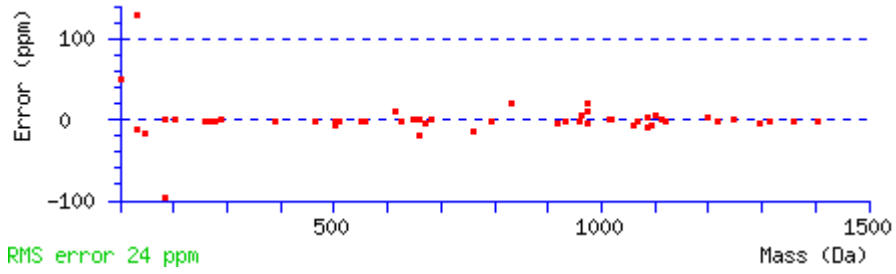
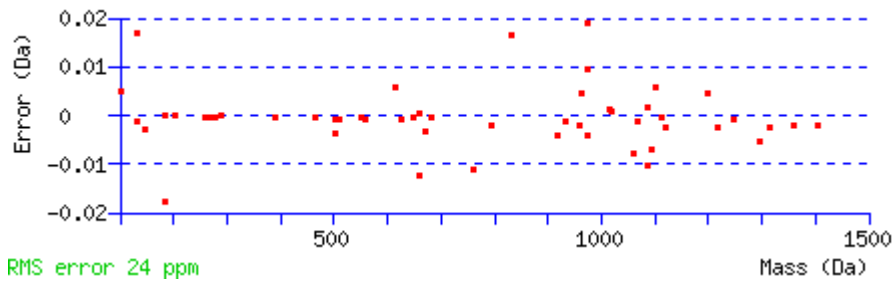
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2333.2087

Variable modifications:

K13 : Sumo 3 (K)

Ions Score: 32 Expect: 0.54

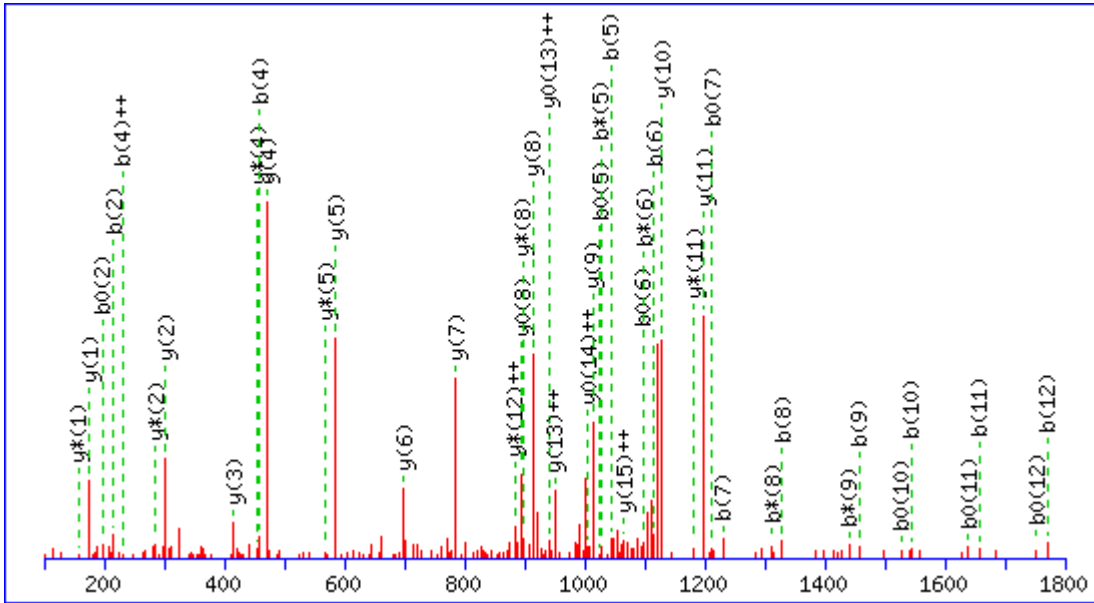
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0913 | 57.5493 | | | | | L | | | | | | | 16 |
| 2 | 201.1234 | 101.0653 | | | 183.1128 | 92.0600 | S | 2221.1320 | 1111.0696 | 2204.1054 | 1102.5564 | 2203.1214 | 1102.0643 | 15 |
| 3 | 288.1554 | 144.5813 | | | 270.1448 | 135.5761 | S | 2134.1000 | 1067.5536 | 2117.0734 | 1059.0403 | 2116.0894 | 1058.5483 | 14 |
| 4 | 387.2238 | 194.1155 | | | 369.2132 | 185.1103 | V | 2047.0679 | 1024.0376 | 2030.0414 | 1015.5243 | 2029.0574 | 1015.0323 | 13 |
| 5 | 502.2508 | 251.6290 | | | 484.2402 | 242.6237 | D | 1947.9995 | 974.5034 | 1930.9730 | 965.9901 | 1929.9889 | 965.4981 | 12 |
| 6 | 658.3519 | 329.6796 | 641.3253 | 321.1663 | 640.3413 | 320.6743 | R | 1832.9726 | 916.9899 | 1815.9460 | 908.4766 | 1814.9620 | 907.9846 | 11 |
| 7 | 795.4108 | 398.2090 | 778.3842 | 389.6958 | 777.4002 | 389.2037 | H | 1676.8715 | 838.9394 | 1659.8449 | 830.4261 | 1658.8609 | 829.9341 | 10 |
| 8 | 932.4697 | 466.7385 | 915.4431 | 458.2252 | 914.4591 | 457.7332 | H | 1539.8125 | 770.4099 | 1522.7860 | 761.8966 | 1521.8020 | 761.4046 | 9 |
| 9 | 1019.5017 | 510.2545 | 1002.4752 | 501.7412 | 1001.4912 | 501.2492 | S | 1402.7536 | 701.8805 | 1385.7271 | 693.3672 | 1384.7431 | 692.8752 | 8 |
| 10 | 1118.5701 | 559.7887 | 1101.5436 | 551.2754 | 1100.5596 | 550.7834 | V | 1315.7216 | 658.3644 | 1298.6951 | 649.8512 | 1297.7110 | 649.3592 | 7 |
| 11 | 1247.6127 | 624.3100 | 1230.5862 | 615.7967 | 1229.6022 | 615.3047 | E | 1216.6532 | 608.8302 | 1199.6266 | 600.3170 | 1198.6426 | 599.8250 | 6 |
| 12 | 1360.6968 | 680.8520 | 1343.6702 | 672.3388 | 1342.6862 | 671.8467 | I | 1087.6106 | 544.3089 | 1070.5841 | 535.7957 | 1069.6000 | 535.3037 | 5 |
| 13 | 1945.9839 | 973.4956 | 1928.9573 | 964.9823 | 1927.9733 | 964.4903 | K | 974.5265 | 487.7669 | 957.5000 | 479.2536 | 956.5160 | 478.7616 | 4 |
| 14 | 2059.0679 | 1030.0376 | 2042.0414 | 1021.5243 | 2041.0574 | 1021.0323 | I | 389.2395 | 195.1234 | 372.2129 | 186.6101 | 371.2289 | 186.1181 | 3 |
| 15 | 2188.1105 | 1094.5589 | 2171.0840 | 1086.0456 | 2170.1000 | 1085.5536 | E | 276.1554 | 138.5813 | 259.1288 | 130.0681 | 258.1448 | 129.5761 | 2 |
| 16 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 42

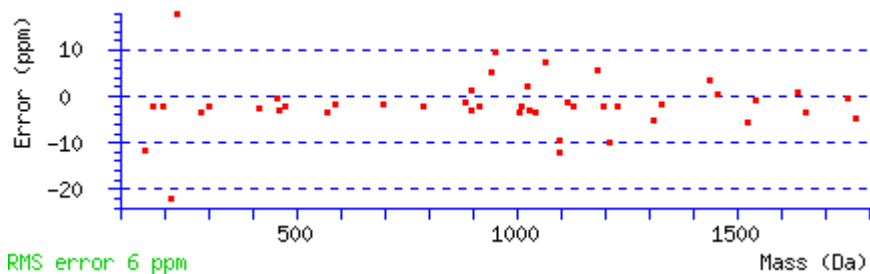
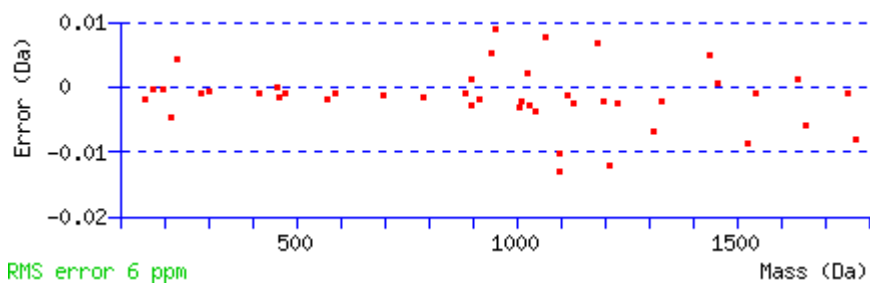
MS/MS Fragmentation of **LTEDKADVQSIIGLQR**

Found in **Q13263**, Transcription intermediary factor 1-beta OS=Homo sapiens GN=TRIM28 PE=1 SV=5



Monoisotopic mass of neutral peptide Mr(calc): 2242.1553 Variable modifications: K5 : Sumo 3 (K) Ions Score: 84 Expect: 4.5e-06

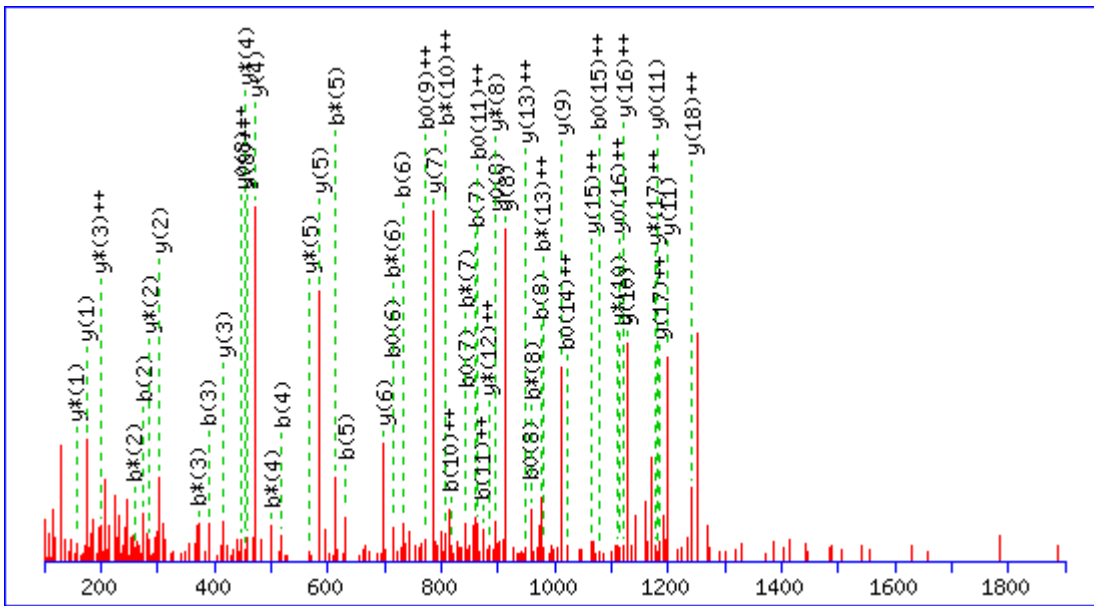
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0913 | 57.5493 | | | | | L | | | | | | | 16 |
| 2 | 215.1390 | 108.0731 | | | 197.1285 | 99.0679 | T | 2130.0786 | 1065.5429 | 2113.0520 | 1057.0296 | 2112.0680 | 1056.5376 | 15 |
| 3 | 344.1816 | 172.5944 | | | 326.1710 | 163.5892 | E | 2029.0309 | 1015.0191 | 2012.0043 | 1006.5058 | 2011.0203 | 1006.0138 | 14 |
| 4 | 459.2086 | 230.1079 | | | 441.1980 | 221.1026 | D | 1899.9883 | 950.4978 | 1882.9617 | 941.9845 | 1881.9777 | 941.4925 | 13 |
| 5 | 1044.4956 | 522.7515 | 1027.4691 | 514.2382 | 1026.4851 | 513.7462 | K | 1784.9613 | 892.9843 | 1767.9348 | 884.4710 | 1766.9508 | 883.9790 | 12 |
| 6 | 1115.5327 | 558.2700 | 1098.5062 | 549.7567 | 1097.5222 | 549.2647 | A | 1199.6743 | 600.3408 | 1182.6477 | 591.8275 | 1181.6637 | 591.3355 | 11 |
| 7 | 1230.5597 | 615.7835 | 1213.5331 | 607.2702 | 1212.5491 | 606.7782 | D | 1128.6371 | 564.8222 | 1111.6106 | 556.3089 | 1110.6266 | 555.8169 | 10 |
| 8 | 1329.6281 | 665.3177 | 1312.6016 | 656.8044 | 1311.6175 | 656.3124 | V | 1013.6102 | 507.3087 | 996.5837 | 498.7955 | 995.5996 | 498.3035 | 9 |
| 9 | 1457.6867 | 729.3470 | 1440.6601 | 720.8337 | 1439.6761 | 720.3417 | Q | 914.5418 | 457.7745 | 897.5152 | 449.2613 | 896.5312 | 448.7693 | 8 |
| 10 | 1544.7187 | 772.8630 | 1527.6922 | 764.3497 | 1526.7081 | 763.8577 | S | 786.4832 | 393.7452 | 769.4567 | 385.2320 | 768.4726 | 384.7400 | 7 |
| 11 | 1657.8028 | 829.4050 | 1640.7762 | 820.8917 | 1639.7922 | 820.3997 | I | 699.4512 | 350.2292 | 682.4246 | 341.7160 | | | 6 |
| 12 | 1770.8868 | 885.9471 | 1753.8603 | 877.4338 | 1752.8763 | 876.9418 | I | 586.3671 | 293.6872 | 569.3406 | 285.1739 | | | 5 |
| 13 | 1827.9083 | 914.4578 | 1810.8817 | 905.9445 | 1809.8977 | 905.4525 | G | 473.2831 | 237.1452 | 456.2565 | 228.6319 | | | 4 |
| 14 | 1940.9924 | 970.9998 | 1923.9658 | 962.4865 | 1922.9818 | 961.9945 | L | 416.2616 | 208.6344 | 399.2350 | 200.1212 | | | 3 |
| 15 | 2069.0509 | 1035.0291 | 2052.0244 | 1026.5158 | 2051.0404 | 1026.0238 | Q | 303.1775 | 152.0924 | 286.1510 | 143.5791 | | | 2 |
| 16 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 43

MS/MS Fragmentation of **QFNKLTEDKADVQSIIGLQR**

Found in **Q13263**, Transcription intermediary factor 1-beta OS=Homo sapiens GN=TRIM28 PE=1 SV=5



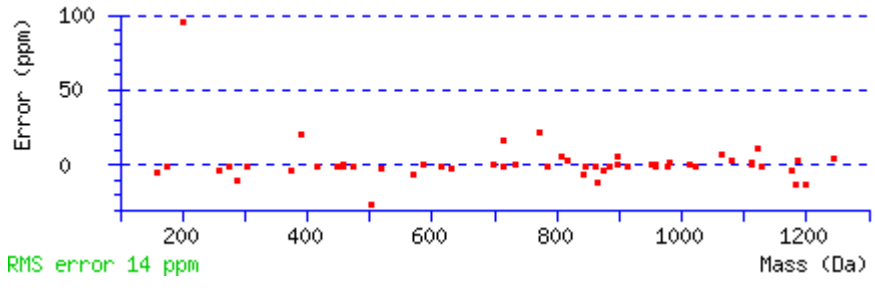
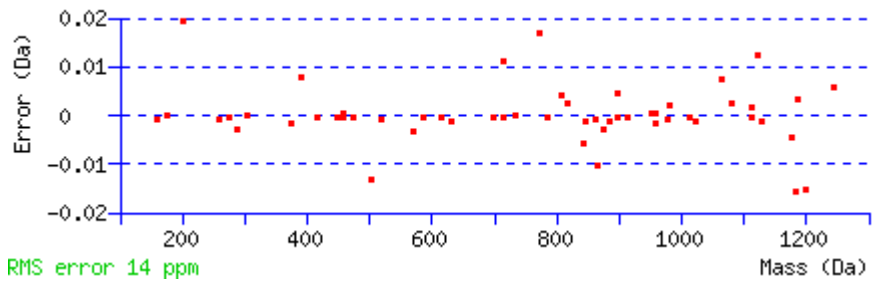
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2759.4202

Variable modifications:

K9 : Sumo 3 (K)

Ions Score: 59 Expect: 0.0013

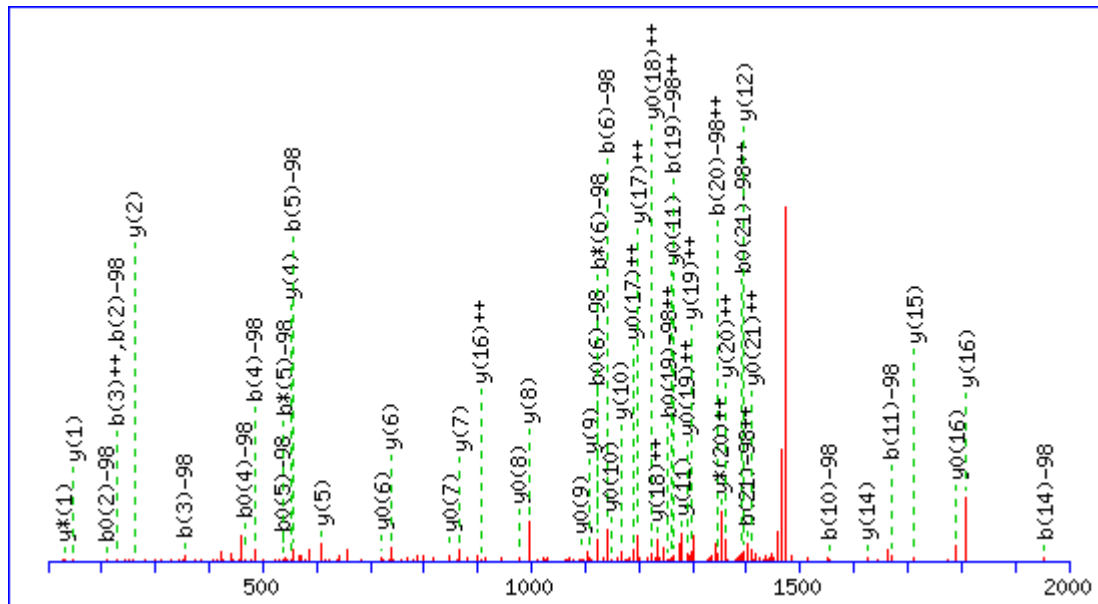
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 129.0659 | 65.0366 | 112.0393 | 56.5233 | | | Q | | | | | | | 20 |
| 2 | 276.1343 | 138.5708 | 259.1077 | 130.0575 | | | F | 2632.3689 | 1316.6881 | 2615.3424 | 1308.1748 | 2614.3584 | 1307.6828 | 19 |
| 3 | 390.1772 | 195.5922 | 373.1506 | 187.0790 | | | N | 2485.3005 | 1243.1539 | 2468.2740 | 1234.6406 | 2467.2899 | 1234.1486 | 18 |
| 4 | 518.2722 | 259.6397 | 501.2456 | 251.1264 | | | K | 2371.2576 | 1186.1324 | 2354.2310 | 1177.6192 | 2353.2470 | 1177.1271 | 17 |
| 5 | 631.3562 | 316.1817 | 614.3297 | 307.6685 | | | L | 2243.1626 | 1122.0849 | 2226.1361 | 1113.5717 | 2225.1521 | 1113.0797 | 16 |
| 6 | 732.4039 | 366.7056 | 715.3774 | 358.1923 | 714.3933 | 357.7003 | T | 2130.0786 | 1065.5429 | 2113.0520 | 1057.0296 | 2112.0680 | 1056.5376 | 15 |
| 7 | 861.4465 | 431.2269 | 844.4199 | 422.7136 | 843.4359 | 422.2216 | E | 2029.0309 | 1015.0191 | 2012.0043 | 1006.5058 | 2011.0203 | 1006.0138 | 14 |
| 8 | 976.4734 | 488.7404 | 959.4469 | 480.2271 | 958.4629 | 479.7351 | D | 1899.9883 | 950.4978 | 1882.9617 | 941.9845 | 1881.9777 | 941.4925 | 13 |
| 9 | 1561.7605 | 781.3839 | 1544.7340 | 772.8706 | 1543.7499 | 772.3786 | K | 1784.9613 | 892.9843 | 1767.9348 | 884.4710 | 1766.9508 | 883.9790 | 12 |
| 10 | 1632.7976 | 816.9025 | 1615.7711 | 808.3892 | 1614.7871 | 807.8972 | A | 1199.6743 | 600.3408 | 1182.6477 | 591.8275 | 1181.6637 | 591.3355 | 11 |
| 11 | 1747.8246 | 874.4159 | 1730.7980 | 865.9026 | 1729.8140 | 865.4106 | D | 1128.6371 | 564.8222 | 1111.6106 | 556.3089 | 1110.6266 | 555.8169 | 10 |
| 12 | 1846.8930 | 923.9501 | 1829.8664 | 915.4369 | 1828.8824 | 914.9448 | V | 1013.6102 | 507.3087 | 996.5837 | 498.7955 | 995.5996 | 498.3035 | 9 |
| 13 | 1974.9516 | 987.9794 | 1957.9250 | 979.4661 | 1956.9410 | 978.9741 | Q | 914.5418 | 457.7745 | 897.5152 | 449.2613 | 896.5312 | 448.7693 | 8 |
| 14 | 2061.9836 | 1031.4954 | 2044.9570 | 1022.9822 | 2043.9730 | 1022.4901 | S | 786.4832 | 393.7452 | 769.4567 | 385.2320 | 768.4726 | 384.7400 | 7 |
| 15 | 2175.0677 | 1088.0375 | 2158.0411 | 1079.5242 | 2157.0571 | 1079.0322 | I | 699.4512 | 350.2292 | 682.4246 | 341.7160 | | | 6 |
| 16 | 2288.1517 | 1144.5795 | 2271.1252 | 1136.0662 | 2270.1412 | 1135.5742 | I | 586.3671 | 293.6872 | 569.3406 | 285.1739 | | | 5 |
| 17 | 2345.1732 | 1173.0902 | 2328.1466 | 1164.5770 | 2327.1626 | 1164.0849 | G | 473.2831 | 237.1452 | 456.2565 | 228.6319 | | | 4 |
| 18 | 2458.2572 | 1229.6323 | 2441.2307 | 1221.1190 | 2440.2467 | 1220.6270 | L | 416.2616 | 208.6344 | 399.2350 | 200.1212 | | | 3 |
| 19 | 2586.3158 | 1293.6615 | 2569.2893 | 1285.1483 | 2568.3053 | 1284.6563 | Q | 303.1775 | 152.0924 | 286.1510 | 143.5791 | | | 2 |
| 20 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 44

MS/MS Fragmentation of **SDQEAKPSTEDLGDKKEGEYIK**

Found in **P63165**, Small ubiquitin-related modifier 1 OS=Homo sapiens GN=SUMO1 PE=1 SV=1



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 3045.3451

Variable modifications:

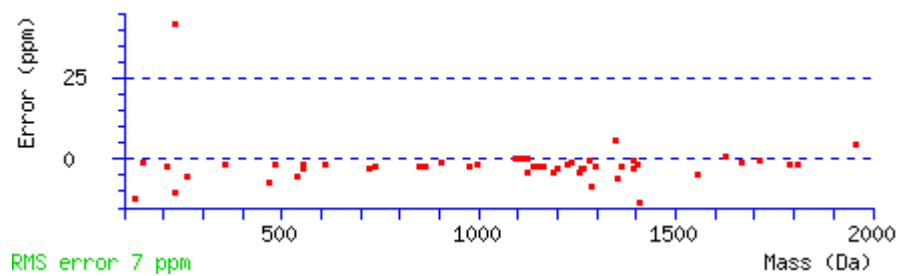
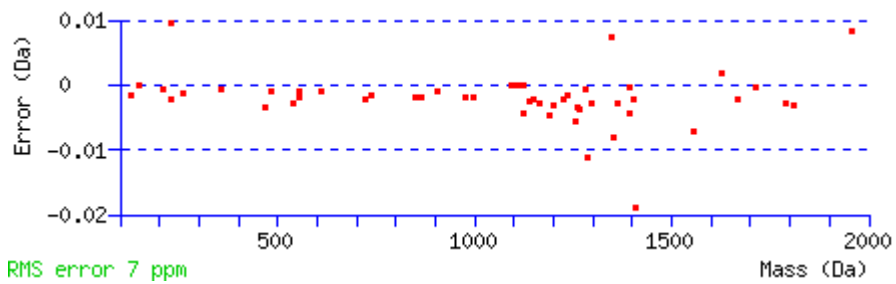
N-term : Acetyl (N-term)

S1 : Phospho (ST), with neutral losses 97.9769 (shown in table), 0.0000

K6 : Sumo 3 (K)

Ions Score: 62 Expect: 0.0041

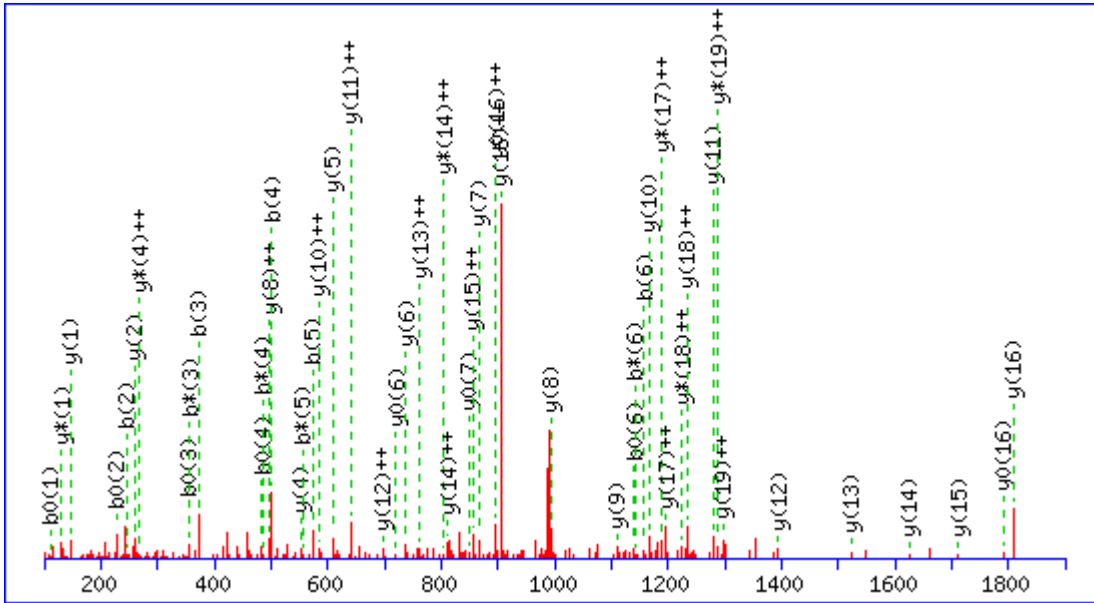
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 112.0393 | 56.5233 | | | 94.0287 | 47.5180 | S | | | | | | | 22 |
| 2 | 227.0662 | 114.0368 | | | 209.0557 | 105.0315 | D | 2837.3436 | 1419.1754 | 2820.3170 | 1410.6621 | 2819.3330 | 1410.1701 | 21 |
| 3 | 355.1248 | 178.0661 | 338.0983 | 169.5528 | 337.1143 | 169.0608 | Q | 2722.3166 | 1361.6619 | 2705.2901 | 1353.1487 | 2704.3060 | 1352.6567 | 20 |
| 4 | 484.1674 | 242.5873 | 467.1409 | 234.0741 | 466.1569 | 233.5821 | E | 2594.2580 | 1297.6327 | 2577.2315 | 1289.1194 | 2576.2475 | 1288.6274 | 19 |
| 5 | 555.2045 | 278.1059 | 538.1780 | 269.5926 | 537.1940 | 269.1006 | A | 2465.2154 | 1233.1114 | 2448.1889 | 1224.5981 | 2447.2049 | 1224.1061 | 18 |
| 6 | 1140.4916 | 570.7494 | 1123.4651 | 562.2362 | 1122.4810 | 561.7442 | K | 2394.1783 | 1197.5928 | 2377.1518 | 1189.0795 | 2376.1678 | 1188.5875 | 17 |
| 7 | 1237.5444 | 619.2758 | 1220.5178 | 610.7625 | 1219.5338 | 610.2705 | P | 1808.8913 | 904.9493 | 1791.8647 | 896.4360 | 1790.8807 | 895.9440 | 16 |
| 8 | 1324.5764 | 662.7918 | 1307.5498 | 654.2786 | 1306.5658 | 653.7866 | S | 1711.8385 | 856.4229 | 1694.8119 | 847.9096 | 1693.8279 | 847.4176 | 15 |
| 9 | 1425.6241 | 713.3157 | 1408.5975 | 704.8024 | 1407.6135 | 704.3104 | T | 1624.8065 | 812.9069 | 1607.7799 | 804.3936 | 1606.7959 | 803.9016 | 14 |
| 10 | 1554.6667 | 777.8370 | 1537.6401 | 769.3237 | 1536.6561 | 768.8317 | E | 1523.7588 | 762.3830 | 1506.7322 | 753.8698 | 1505.7482 | 753.3777 | 13 |
| 11 | 1669.6936 | 835.3504 | 1652.6671 | 826.8372 | 1651.6830 | 826.3452 | D | 1394.7162 | 697.8617 | 1377.6896 | 689.3485 | 1376.7056 | 688.8564 | 12 |
| 12 | 1782.7777 | 891.8925 | 1765.7511 | 883.3792 | 1764.7671 | 882.8872 | L | 1279.6892 | 640.3483 | 1262.6627 | 631.8350 | 1261.6787 | 631.3430 | 11 |
| 13 | 1839.7991 | 920.4032 | 1822.7726 | 911.8899 | 1821.7886 | 911.3979 | G | 1166.6052 | 583.8062 | 1149.5786 | 575.2930 | 1148.5946 | 574.8009 | 10 |
| 14 | 1954.8261 | 977.9167 | 1937.7995 | 969.4034 | 1936.8155 | 968.9114 | D | 1109.5837 | 555.2955 | 1092.5572 | 546.7822 | 1091.5732 | 546.2902 | 9 |
| 15 | 2082.9210 | 1041.9642 | 2065.8945 | 1033.4509 | 2064.9105 | 1032.9589 | K | 994.5568 | 497.7820 | 977.5302 | 489.2688 | 976.5462 | 488.7767 | 8 |
| 16 | 2211.0160 | 1106.0116 | 2193.9895 | 1097.4984 | 2193.0054 | 1097.0064 | K | 866.4618 | 433.7345 | 849.4353 | 425.2213 | 848.4512 | 424.7293 | 7 |
| 17 | 2340.0586 | 1170.5329 | 2323.0321 | 1162.0197 | 2322.0480 | 1161.5277 | E | 738.3668 | 369.6871 | 721.3403 | 361.1738 | 720.3563 | 360.6818 | 6 |
| 18 | 2397.0801 | 1199.0437 | 2380.0535 | 1190.5304 | 2379.0695 | 1190.0384 | G | 609.3243 | 305.1658 | 592.2977 | 296.6525 | 591.3137 | 296.1605 | 5 |
| 19 | 2526.1227 | 1263.5650 | 2509.0961 | 1255.0517 | 2508.1121 | 1254.5597 | E | 552.3028 | 276.6550 | 535.2762 | 268.1418 | 534.2922 | 267.6498 | 4 |
| 20 | 2689.1860 | 1345.0966 | 2672.1594 | 1336.5834 | 2671.1754 | 1336.0913 | Y | 423.2602 | 212.1337 | 406.2336 | 203.6205 | | | 3 |
| 21 | 2802.2701 | 1401.6387 | 2785.2435 | 1393.1254 | 2784.2595 | 1392.6334 | I | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 22 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 45

MS/MS Fragmentation of **SDQEAKPSTEDLGDKKEGEYIK**

Found in **P63165**, Small ubiquitin-related modifier 1 OS=Homo sapiens GN=SUMO1 PE=1 SV=1



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2965.3788

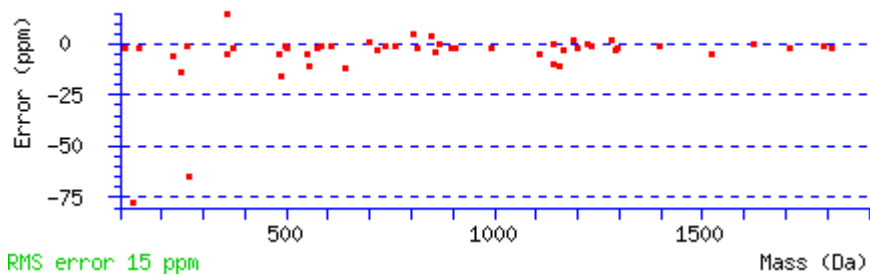
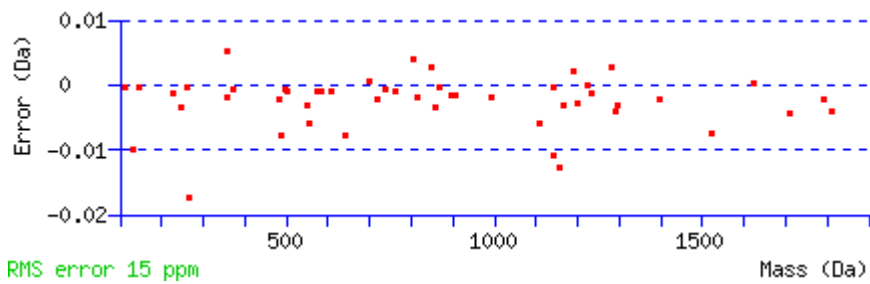
Variable modifications:

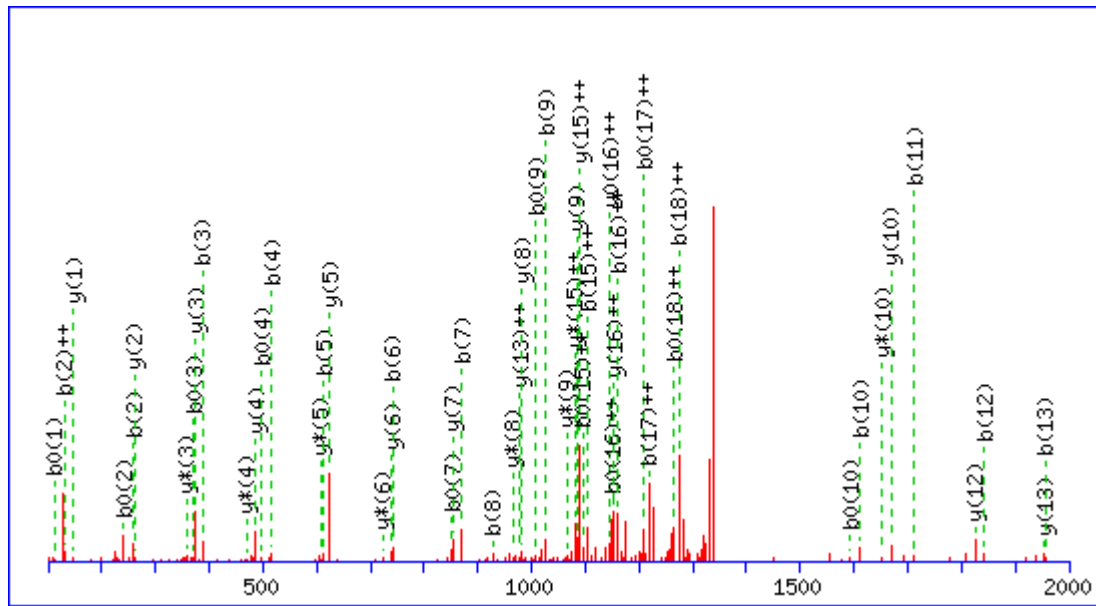
N-term : Acetyl (N-term)

K6 : Sumo 3 (K)

Ions Score: 63 Expect: 0.0025

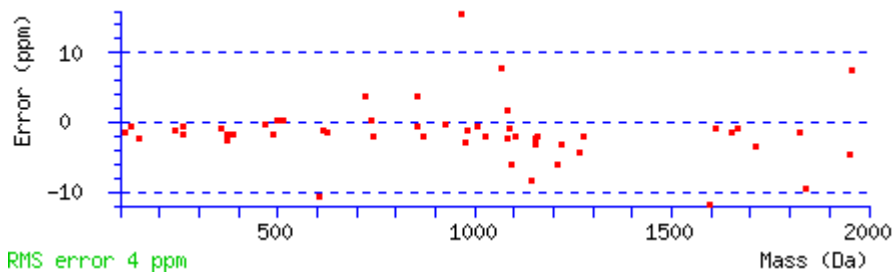
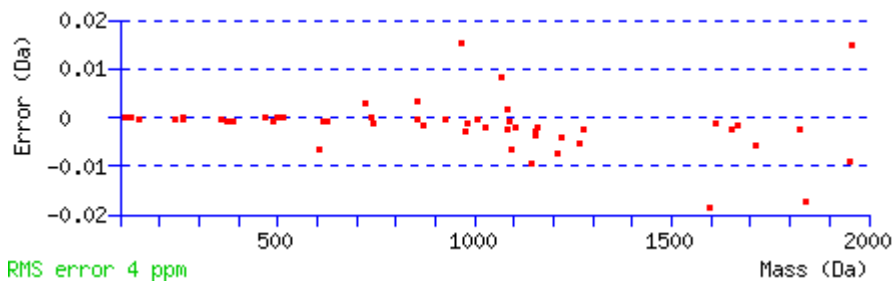
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 130.0499 | 65.5286 | | | 112.0393 | 56.5233 | S | | | | | | | 22 |
| 2 | 245.0768 | 123.0420 | | | 227.0662 | 114.0368 | D | 2837.3436 | 1419.1754 | 2820.3170 | 1410.6621 | 2819.3330 | 1410.1701 | 21 |
| 3 | 373.1354 | 187.0713 | 356.1088 | 178.5581 | 355.1248 | 178.0661 | Q | 2722.3166 | 1361.6619 | 2705.2901 | 1353.1487 | 2704.3060 | 1352.6567 | 20 |
| 4 | 502.1780 | 251.5926 | 485.1514 | 243.0794 | 484.1674 | 242.5873 | E | 2594.2580 | 1297.6327 | 2577.2315 | 1289.1194 | 2576.2475 | 1288.6274 | 19 |
| 5 | 573.2151 | 287.1112 | 556.1885 | 278.5979 | 555.2045 | 278.1059 | A | 2465.2154 | 1233.1114 | 2448.1889 | 1224.5981 | 2447.2049 | 1224.1061 | 18 |
| 6 | 1158.5022 | 579.7547 | 1141.4756 | 571.2414 | 1140.4916 | 570.7494 | K | 2394.1783 | 1197.5928 | 2377.1518 | 1189.0795 | 2376.1678 | 1188.5875 | 17 |
| 7 | 1255.5549 | 628.2811 | 1238.5284 | 619.7678 | 1237.5444 | 619.2758 | P | 1808.8913 | 904.9493 | 1791.8647 | 896.4360 | 1790.8807 | 895.9440 | 16 |
| 8 | 1342.5870 | 671.7971 | 1325.5604 | 663.2838 | 1324.5764 | 662.7918 | S | 1711.8385 | 856.4229 | 1694.8119 | 847.9096 | 1693.8279 | 847.4176 | 15 |
| 9 | 1443.6346 | 722.3210 | 1426.6081 | 713.8077 | 1425.6241 | 713.3157 | T | 1624.8065 | 812.9069 | 1607.7799 | 804.3936 | 1606.7959 | 803.9016 | 14 |
| 10 | 1572.6772 | 786.8423 | 1555.6507 | 778.3290 | 1554.6667 | 777.8370 | E | 1523.7588 | 762.3830 | 1506.7322 | 753.8698 | 1505.7482 | 753.3777 | 13 |
| 11 | 1687.7042 | 844.3557 | 1670.6776 | 835.8425 | 1669.6936 | 835.3504 | D | 1394.7162 | 697.8617 | 1377.6896 | 689.3485 | 1376.7056 | 688.8564 | 12 |
| 12 | 1800.7882 | 900.8978 | 1783.7617 | 892.3845 | 1782.7777 | 891.8925 | L | 1279.6892 | 640.3483 | 1262.6627 | 631.8350 | 1261.6787 | 631.3430 | 11 |
| 13 | 1857.8097 | 929.4085 | 1840.7832 | 920.8952 | 1839.7991 | 920.4032 | G | 1166.6052 | 583.8062 | 1149.5786 | 575.2930 | 1148.5946 | 574.8009 | 10 |
| 14 | 1972.8366 | 986.9220 | 1955.8101 | 978.4087 | 1954.8261 | 977.9167 | D | 1109.5837 | 555.2955 | 1092.5572 | 546.7822 | 1091.5732 | 546.2902 | 9 |
| 15 | 2100.9316 | 1050.9694 | 2083.9051 | 1042.4562 | 2082.9210 | 1041.9642 | K | 994.5568 | 497.7820 | 977.5302 | 489.2688 | 976.5462 | 488.7767 | 8 |
| 16 | 2229.0266 | 1115.0169 | 2212.0000 | 1106.5037 | 2211.0160 | 1106.0116 | K | 866.4618 | 433.7345 | 849.4353 | 425.2213 | 848.4512 | 424.7293 | 7 |
| 17 | 2358.0692 | 1179.5382 | 2341.0426 | 1171.0249 | 2340.0586 | 1170.5329 | E | 738.3668 | 369.6871 | 721.3403 | 361.1738 | 720.3563 | 360.6818 | 6 |
| 18 | 2415.0906 | 1208.0490 | 2398.0641 | 1199.5357 | 2397.0801 | 1199.0437 | G | 609.3243 | 305.1658 | 592.2977 | 296.6525 | 591.3137 | 296.1605 | 5 |
| 19 | 2544.1332 | 1272.5703 | 2527.1067 | 1264.0570 | 2526.1227 | 1263.5650 | E | 552.3028 | 276.6550 | 535.2762 | 268.1418 | 534.2922 | 267.6498 | 4 |
| 20 | 2707.1966 | 1354.1019 | 2690.1700 | 1345.5886 | 2689.1860 | 1345.0966 | Y | 423.2602 | 212.1337 | 406.2336 | 203.6205 | | | 3 |
| 21 | 2820.2806 | 1410.6439 | 2803.2541 | 1402.1307 | 2802.2701 | 1401.6387 | I | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 22 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



MS/MS Fragmentation of **SEEKPKEGVKTENDHNLK**Found in **P55854**, Small ubiquitin-related modifier 3 OS=Homo sapiens GN=SUMO3 PE=1 SV=2

Monoisotopic mass of neutral peptide Mr(calc): 2693.3256 Variable modifications: N-term : Acetyl (N-term) K10 : Sumo 3
(K) Ions Score: 88 Expect: 3.8e-06

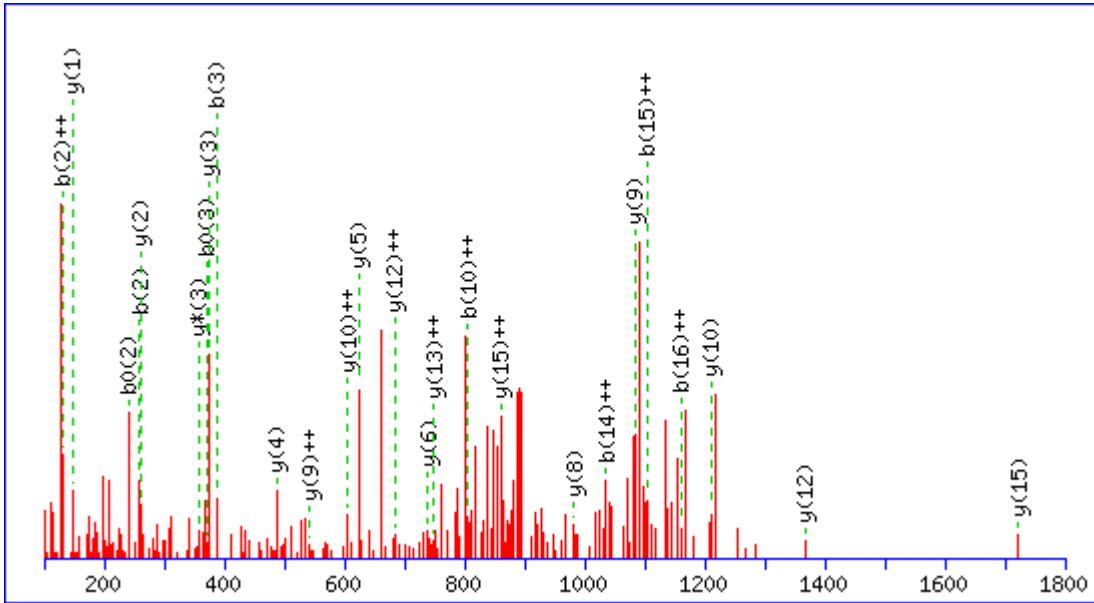
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 130.0499 | 65.5286 | | | 112.0393 | 56.5233 | S | | | | | | | 19 |
| 2 | 259.0925 | 130.0499 | | | 241.0819 | 121.0446 | E | 2565.2903 | 1283.1488 | 2548.2638 | 1274.6355 | 2547.2798 | 1274.1435 | 18 |
| 3 | 388.1351 | 194.5712 | | | 370.1245 | 185.5659 | E | 2436.2477 | 1218.6275 | 2419.2212 | 1210.1142 | 2418.2372 | 1209.6222 | 17 |
| 4 | 516.2300 | 258.6186 | 499.2035 | 250.1054 | 498.2195 | 249.6134 | K | 2307.2051 | 1154.1062 | 2290.1786 | 1145.5929 | 2289.1946 | 1145.1009 | 16 |
| 5 | 613.2828 | 307.1450 | 596.2562 | 298.6318 | 595.2722 | 298.1397 | P | 2179.1102 | 1090.0587 | 2162.0836 | 1081.5455 | 2161.0996 | 1081.0534 | 15 |
| 6 | 741.3777 | 371.1925 | 724.3512 | 362.6792 | 723.3672 | 362.1872 | K | 2082.0574 | 1041.5323 | 2065.0309 | 1033.0191 | 2064.0469 | 1032.5271 | 14 |
| 7 | 870.4203 | 435.7138 | 853.3938 | 427.2005 | 852.4098 | 426.7085 | E | 1953.9625 | 977.4849 | 1936.9359 | 968.9716 | 1935.9519 | 968.4796 | 13 |
| 8 | 927.4418 | 464.2245 | 910.4153 | 455.7113 | 909.4312 | 455.2193 | G | 1824.9199 | 912.9636 | 1807.8933 | 904.4503 | 1806.9093 | 903.9583 | 12 |
| 9 | 1026.5102 | 513.7587 | 1009.4837 | 505.2455 | 1008.4997 | 504.7535 | V | 1767.8984 | 884.4528 | 1750.8719 | 875.9396 | 1749.8878 | 875.4476 | 11 |
| 10 | 1611.7973 | 806.4023 | 1594.7707 | 797.8890 | 1593.7867 | 797.3970 | K | 1668.8300 | 834.9186 | 1651.8034 | 826.4054 | 1650.8194 | 825.9133 | 10 |
| 11 | 1712.8450 | 856.9261 | 1695.8184 | 848.4128 | 1694.8344 | 847.9208 | T | 1083.5429 | 542.2751 | 1066.5164 | 533.7618 | 1065.5323 | 533.2698 | 9 |
| 12 | 1841.8876 | 921.4474 | 1824.8610 | 912.9341 | 1823.8770 | 912.4421 | E | 982.4952 | 491.7513 | 965.4687 | 483.2380 | 964.4847 | 482.7460 | 8 |
| 13 | 1955.9305 | 978.4689 | 1938.9039 | 969.9556 | 1937.9199 | 969.4636 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 14 | 2070.9574 | 1035.9824 | 2053.9309 | 1027.4691 | 2052.9469 | 1026.9771 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 15 | 2208.0163 | 1104.5118 | 2190.9898 | 1095.9985 | 2190.0058 | 1095.5065 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 16 | 2321.1004 | 1161.0538 | 2304.0739 | 1152.5406 | 2303.0898 | 1152.0486 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 17 | 2435.1433 | 1218.0753 | 2418.1168 | 1209.5620 | 2417.1328 | 1209.0700 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 18 | 2548.2274 | 1274.6173 | 2531.2009 | 1266.1041 | 2530.2168 | 1265.6121 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 19 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 47

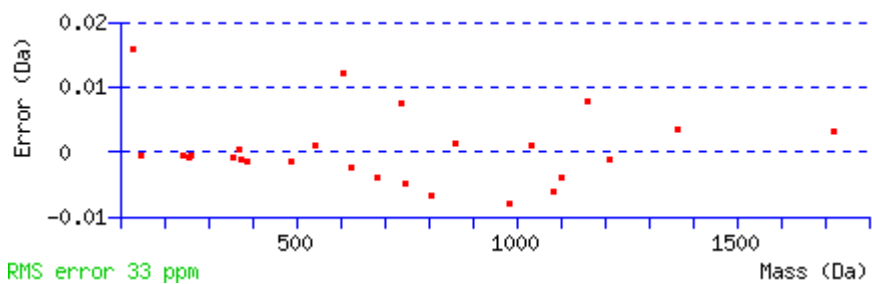
MS/MS Fragmentation of **SEEKPKEGVKTENDHINLK**

Found in **P55854**, Small ubiquitin-related modifier 3 OS=Homo sapiens GN=SUMO3 PE=1 SV=2

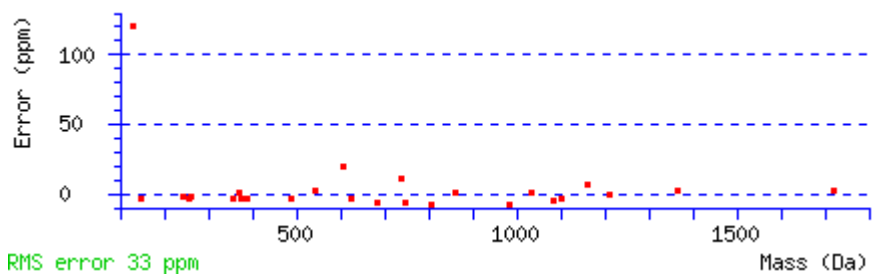


Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2693.3256 Variable modifications: N-term : Acetyl (N-term) K4 : Sumo 3 (K) Ions Score: 23 Expect: 14

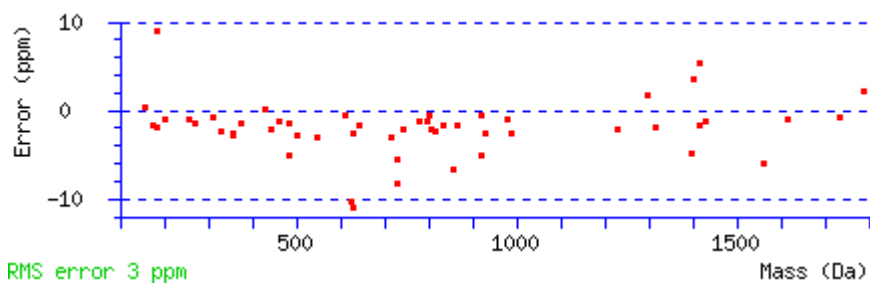
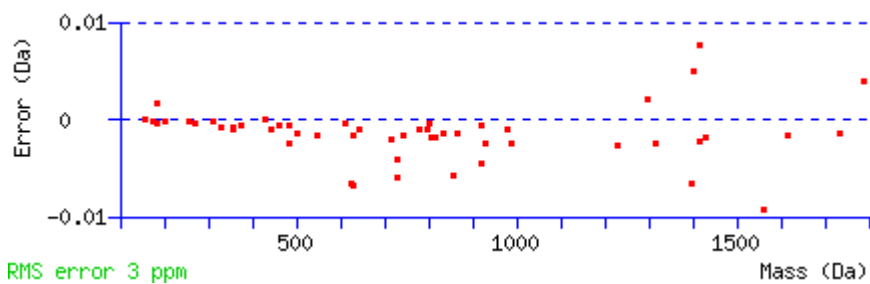
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 130.0499 | 65.5286 | | | 112.0393 | 56.5233 | S | | | | | | | 19 |
| 2 | 259.0925 | 130.0499 | | | 241.0819 | 121.0446 | E | 2565.2903 | 1283.1488 | 2548.2638 | 1274.6355 | 2547.2798 | 1274.1435 | 18 |
| 3 | 388.1351 | 194.5712 | | | 370.1245 | 185.5659 | E | 2436.2477 | 1218.6275 | 2419.2212 | 1210.1142 | 2418.2372 | 1209.6222 | 17 |
| 4 | 973.4221 | 487.2147 | 956.3956 | 478.7014 | 955.4116 | 478.2094 | K | 2307.2051 | 1154.1062 | 2290.1786 | 1145.5929 | 2289.1946 | 1145.1009 | 16 |
| 5 | 1070.4749 | 535.7411 | 1053.4483 | 527.2278 | 1052.4643 | 526.7358 | P | 1721.9181 | 861.4627 | 1704.8915 | 852.9494 | 1703.9075 | 852.4574 | 15 |
| 6 | 1198.5699 | 599.7886 | 1181.5433 | 591.2753 | 1180.5593 | 590.7833 | K | 1624.8653 | 812.9363 | 1607.8388 | 804.4230 | 1606.8547 | 803.9310 | 14 |
| 7 | 1327.6124 | 664.3099 | 1310.5859 | 655.7966 | 1309.6019 | 655.3046 | E | 1496.7703 | 748.8888 | 1479.7438 | 740.3755 | 1478.7598 | 739.8835 | 13 |
| 8 | 1384.6339 | 692.8206 | 1367.6074 | 684.3073 | 1366.6233 | 683.8153 | G | 1367.7278 | 684.3675 | 1350.7012 | 675.8542 | 1349.7172 | 675.3622 | 12 |
| 9 | 1483.7023 | 742.3548 | 1466.6758 | 733.8415 | 1465.6918 | 733.3495 | V | 1310.7063 | 655.8568 | 1293.6797 | 647.3435 | 1292.6957 | 646.8515 | 11 |
| 10 | 1611.7973 | 806.4023 | 1594.7707 | 797.8890 | 1593.7867 | 797.3970 | K | 1211.6379 | 606.3226 | 1194.6113 | 597.8093 | 1193.6273 | 597.3173 | 10 |
| 11 | 1712.8450 | 856.9261 | 1695.8184 | 848.4128 | 1694.8344 | 847.9208 | T | 1083.5429 | 542.2751 | 1066.5164 | 533.7618 | 1065.5323 | 533.2698 | 9 |
| 12 | 1841.8876 | 921.4474 | 1824.8610 | 912.9341 | 1823.8770 | 912.4421 | E | 982.4952 | 491.7513 | 965.4687 | 483.2380 | 964.4847 | 482.7460 | 8 |
| 13 | 1955.9305 | 978.4689 | 1938.9039 | 969.9556 | 1937.9199 | 969.4636 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 14 | 2070.9574 | 1035.9824 | 2053.9309 | 1027.4691 | 2052.9469 | 1026.9771 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 15 | 2208.0163 | 1104.5118 | 2190.9898 | 1095.9985 | 2190.0058 | 1095.5065 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 16 | 2321.1004 | 1161.0538 | 2304.0739 | 1152.5406 | 2303.0898 | 1152.0486 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 17 | 2435.1433 | 1218.0753 | 2418.1168 | 1209.5620 | 2417.1328 | 1209.0700 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 18 | 2548.2274 | 1274.6173 | 2531.2009 | 1266.1041 | 2530.2168 | 1265.6121 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 19 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



RMS error 33 ppm

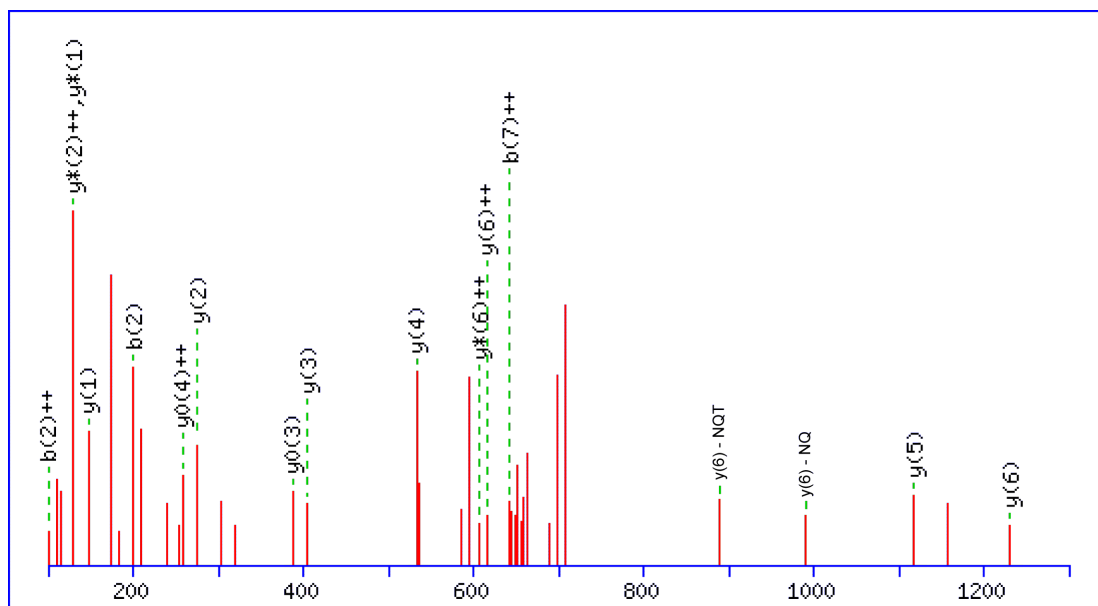


RMS error 33 ppm



MS/MS Fragmentation of **TVIKKEEK**

Found in **Q14151**, Scaffold attachment factor B2 OS=Homo sapiens GN=SAFB2 PE=1 SV=1



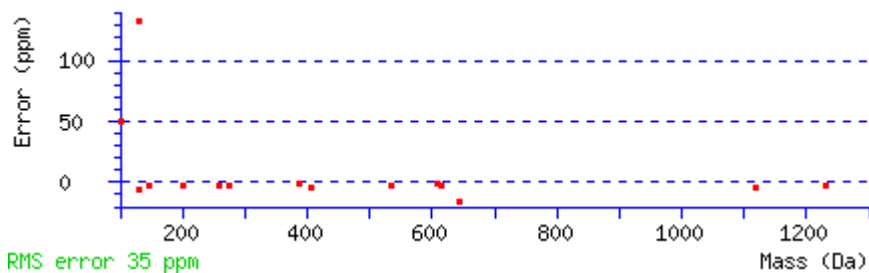
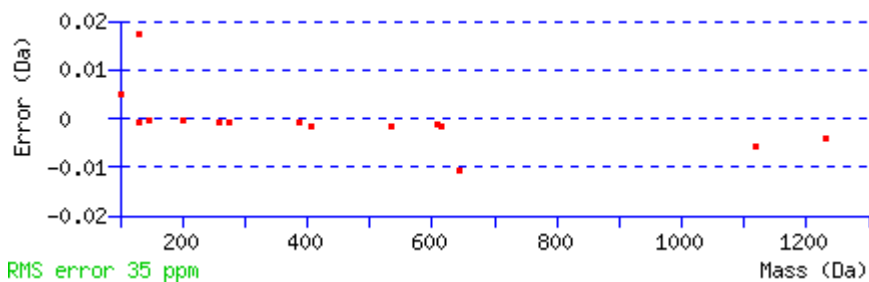
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1430.7729

Variable modifications:

K4 : Sumo 3 (K)

Ions Score: 29 Expect: 0.45

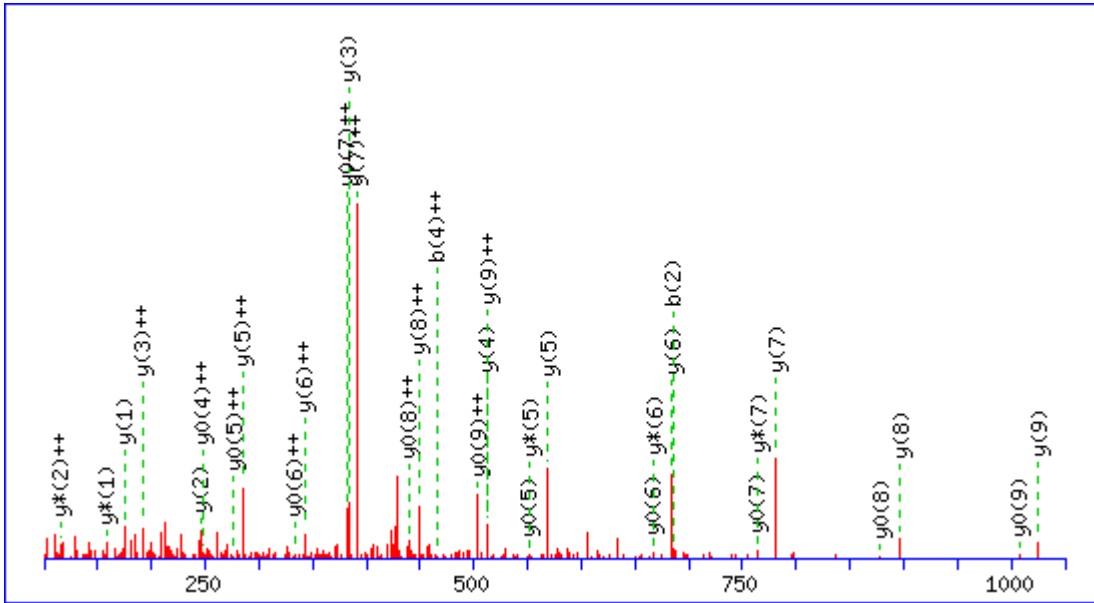
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|---|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|---|
| 1 | 102.0550 | 51.5311 | | | 84.0444 | 42.5258 | T | | | | | | | 8 |
| 2 | 201.1234 | 101.0653 | | | 183.1128 | 92.0600 | V | 1330.7325 | 665.8699 | 1313.7060 | 657.3566 | 1312.7219 | 656.8646 | 7 |
| 3 | 314.2074 | 157.6074 | | | 296.1969 | 148.6021 | I | 1231.6641 | 616.3357 | 1214.6375 | 607.8224 | 1213.6535 | 607.3304 | 6 |
| 4 | 899.4945 | 450.2509 | 882.4680 | 441.7376 | 881.4839 | 441.2456 | K | 1118.5800 | 559.7937 | 1101.5535 | 551.2804 | 1100.5695 | 550.7884 | 5 |
| 5 | 1027.5895 | 514.2984 | 1010.5629 | 505.7851 | 1009.5789 | 505.2931 | K | 533.2930 | 267.1501 | 516.2664 | 258.6368 | 515.2824 | 258.1448 | 4 |
| 6 | 1156.6321 | 578.8197 | 1139.6055 | 570.3064 | 1138.6215 | 569.8144 | E | 405.1980 | 203.1026 | 388.1714 | 194.5894 | 387.1874 | 194.0974 | 3 |
| 7 | 1285.6747 | 643.3410 | 1268.6481 | 634.8277 | 1267.6641 | 634.3357 | E | 276.1554 | 138.5813 | 259.1288 | 130.0681 | 258.1448 | 129.5761 | 2 |
| 8 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 50

MS/MS Fragmentation of **VKEDPDGEHAR**

Found in **P52272**, Heterogeneous nuclear ribonucleoprotein M OS=Homo sapiens GN=HNRNPM PE=1 SV=3



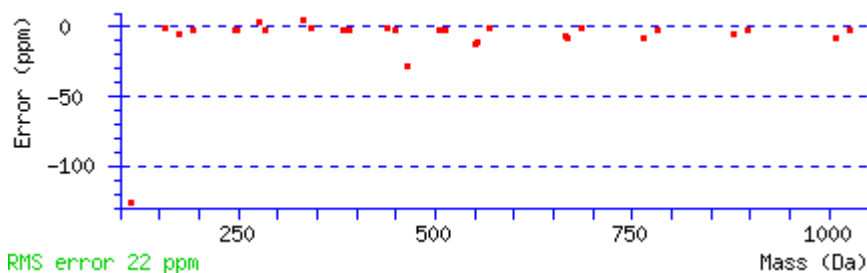
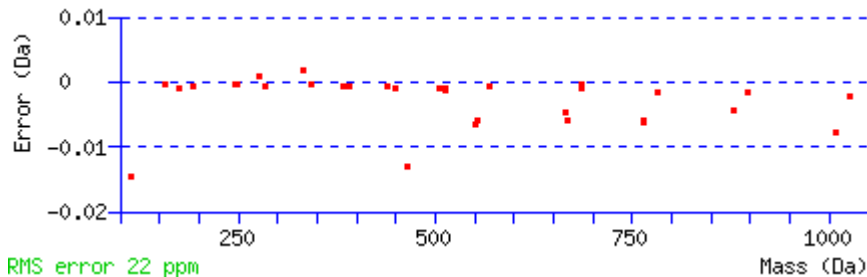
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1708.7765

Variable modifications:

K2 : Sumo 3 (K)

Ions Score: 61 Expect: 0.0013

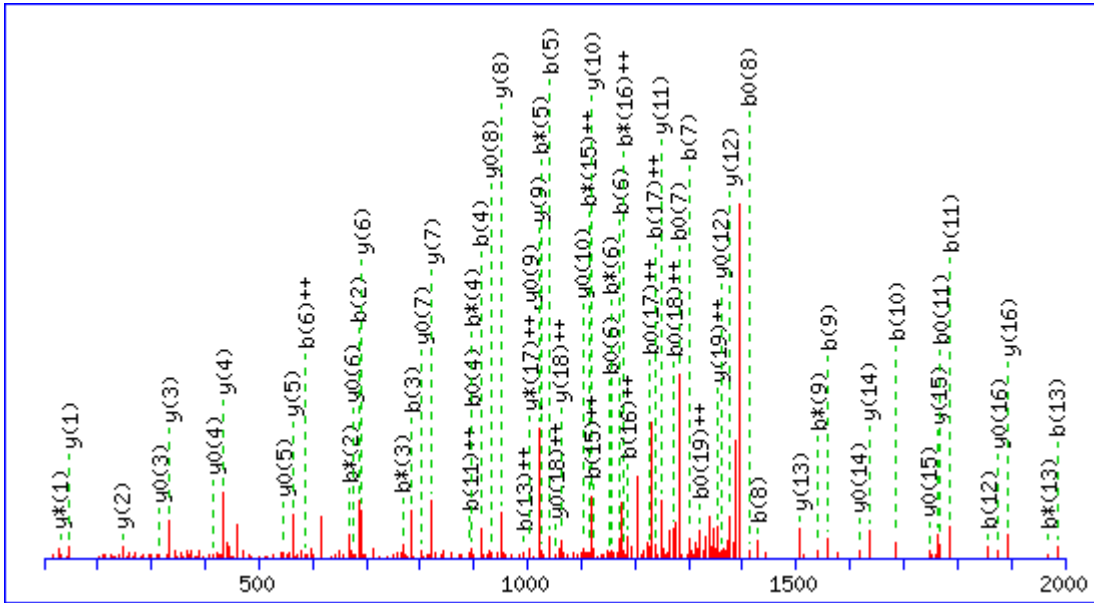
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 100.0757 | 50.5415 | | | | | V | | | | | | | 11 |
| 2 | 685.3628 | 343.1850 | 668.3362 | 334.6717 | | | K | 1610.7154 | 805.8613 | 1593.6888 | 797.3480 | 1592.7048 | 796.8560 | 10 |
| 3 | 814.4054 | 407.7063 | 797.3788 | 399.1930 | 796.3948 | 398.7010 | E | 1025.4283 | 513.2178 | 1008.4017 | 504.7045 | 1007.4177 | 504.2125 | 9 |
| 4 | 929.4323 | 465.2198 | 912.4058 | 456.7065 | 911.4217 | 456.2145 | D | 896.3857 | 448.6965 | 879.3591 | 440.1832 | 878.3751 | 439.6912 | 8 |
| 5 | 1026.4851 | 513.7462 | 1009.4585 | 505.2329 | 1008.4745 | 504.7409 | P | 781.3587 | 391.1830 | 764.3322 | 382.6697 | 763.3482 | 382.1777 | 7 |
| 6 | 1141.5120 | 571.2596 | 1124.4855 | 562.7464 | 1123.5014 | 562.2544 | D | 684.3060 | 342.6566 | 667.2794 | 334.1434 | 666.2954 | 333.6513 | 6 |
| 7 | 1198.5335 | 599.7704 | 1181.5069 | 591.2571 | 1180.5229 | 590.7651 | G | 569.2790 | 285.1432 | 552.2525 | 276.6299 | 551.2685 | 276.1379 | 5 |
| 8 | 1327.5761 | 664.2917 | 1310.5495 | 655.7784 | 1309.5655 | 655.2864 | E | 512.2576 | 256.6324 | 495.2310 | 248.1191 | 494.2470 | 247.6271 | 4 |
| 9 | 1464.6350 | 732.8211 | 1447.6084 | 724.3079 | 1446.6244 | 723.8158 | H | 383.2150 | 192.1111 | 366.1884 | 183.5979 | | | 3 |
| 10 | 1535.6721 | 768.3397 | 1518.6455 | 759.8264 | 1517.6615 | 759.3344 | A | 246.1561 | 123.5817 | 229.1295 | 115.0684 | | | 2 |
| 11 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 52

MS/MS Fragmentation of **VKVEEEEEKVAEEETSVK**

Found in **Q9Y2X3**, Nucleolar protein 58 OS=Homo sapiens GN=NOP58 PE=1 SV=1



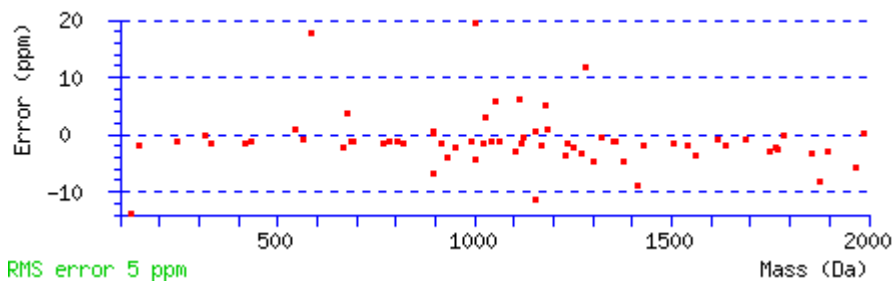
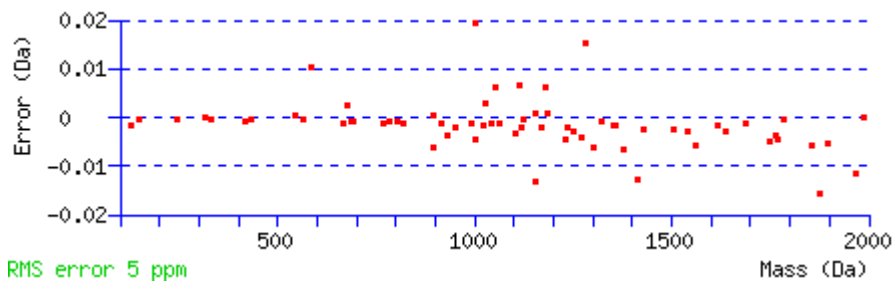
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2805.3039

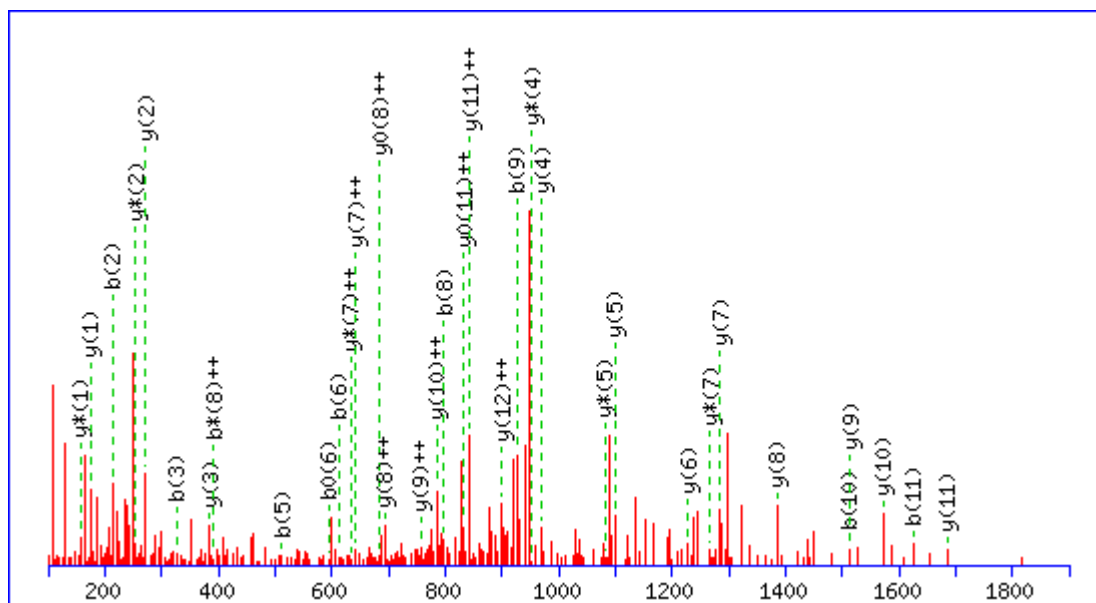
Variable modifications:

K2 : Sumo 3 (K)

Ions Score: 124 Expect: 2e-09

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 100.0757 | 50.5415 | | | | | V | | | | | | | 20 |
| 2 | 685.3628 | 343.1850 | 668.3362 | 334.6717 | | | K | 2707.2428 | 1354.1251 | 2690.2163 | 1345.6118 | 2689.2323 | 1345.1198 | 19 |
| 3 | 784.4312 | 392.7192 | 767.4046 | 384.2060 | | | V | 2121.9558 | 1061.4815 | 2104.9292 | 1052.9682 | 2103.9452 | 1052.4762 | 18 |
| 4 | 913.4738 | 457.2405 | 896.4472 | 448.7272 | 895.4632 | 448.2352 | E | 2022.8873 | 1011.9473 | 2005.8608 | 1003.4340 | 2004.8768 | 1002.9420 | 17 |
| 5 | 1042.5164 | 521.7618 | 1025.4898 | 513.2485 | 1024.5058 | 512.7565 | E | 1893.8448 | 947.4260 | 1876.8182 | 938.9127 | 1875.8342 | 938.4207 | 16 |
| 6 | 1171.5590 | 586.2831 | 1154.5324 | 577.7698 | 1153.5484 | 577.2778 | E | 1764.8022 | 882.9047 | 1747.7756 | 874.3914 | 1746.7916 | 873.8994 | 15 |
| 7 | 1300.6016 | 650.8044 | 1283.5750 | 642.2911 | 1282.5910 | 641.7991 | E | 1635.7596 | 818.3834 | 1618.7330 | 809.8701 | 1617.7490 | 809.3781 | 14 |
| 8 | 1429.6441 | 715.3257 | 1412.6176 | 706.8124 | 1411.6336 | 706.3204 | E | 1506.7170 | 753.8621 | 1489.6904 | 745.3489 | 1488.7064 | 744.8568 | 13 |
| 9 | 1558.6867 | 779.8470 | 1541.6602 | 771.3337 | 1540.6762 | 770.8417 | E | 1377.6744 | 689.3408 | 1360.6478 | 680.8276 | 1359.6638 | 680.3355 | 12 |
| 10 | 1686.7817 | 843.8945 | 1669.7552 | 835.3812 | 1668.7711 | 834.8892 | K | 1248.6318 | 624.8195 | 1231.6052 | 616.3063 | 1230.6212 | 615.8142 | 11 |
| 11 | 1785.8501 | 893.4287 | 1768.8236 | 884.9154 | 1767.8395 | 884.4234 | V | 1120.5368 | 560.7721 | 1103.5103 | 552.2588 | 1102.5263 | 551.7668 | 10 |
| 12 | 1856.8872 | 928.9473 | 1839.8607 | 920.4340 | 1838.8767 | 919.9420 | A | 1021.4684 | 511.2378 | 1004.4419 | 502.7246 | 1003.4578 | 502.2326 | 9 |
| 13 | 1985.9298 | 993.4685 | 1968.9033 | 984.9553 | 1967.9193 | 984.4633 | E | 950.4313 | 475.7193 | 933.4047 | 467.2060 | 932.4207 | 466.7140 | 8 |
| 14 | 2114.9724 | 1057.9898 | 2097.9459 | 1049.4766 | 2096.9618 | 1048.9846 | E | 821.3887 | 411.1980 | 804.3622 | 402.6847 | 803.3781 | 402.1927 | 7 |
| 15 | 2244.0150 | 1122.5111 | 2226.9885 | 1113.9979 | 2226.0044 | 1113.5059 | E | 692.3461 | 346.6767 | 675.3196 | 338.1634 | 674.3355 | 337.6714 | 6 |
| 16 | 2373.0576 | 1187.0324 | 2356.0311 | 1178.5192 | 2355.0470 | 1178.0272 | E | 563.3035 | 282.1554 | 546.2770 | 273.6421 | 545.2930 | 273.1501 | 5 |
| 17 | 2474.1053 | 1237.5563 | 2457.0787 | 1229.0430 | 2456.0947 | 1228.5510 | T | 434.2609 | 217.6341 | 417.2344 | 209.1208 | 416.2504 | 208.6288 | 4 |
| 18 | 2561.1373 | 1281.0723 | 2544.1108 | 1272.5590 | 2543.1267 | 1272.0670 | S | 333.2132 | 167.1103 | 316.1867 | 158.5970 | 315.2027 | 158.1050 | 3 |
| 19 | 2660.2057 | 1330.6065 | 2643.1792 | 1322.0932 | 2642.1952 | 1321.6012 | V | 246.1812 | 123.5942 | 229.1547 | 115.0810 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



MS/MS Fragmentation of **VLLGETGKEKLPR**Found in **P62280**, 40S ribosomal protein S11 OS=Homo sapiens GN=RPS11 PE=1 SV=3Monoisotopic mass of neutral peptide $M_r(\text{calc})$:

1896.0428

Variable modifications:

K10 :

Sumo 3 (K)

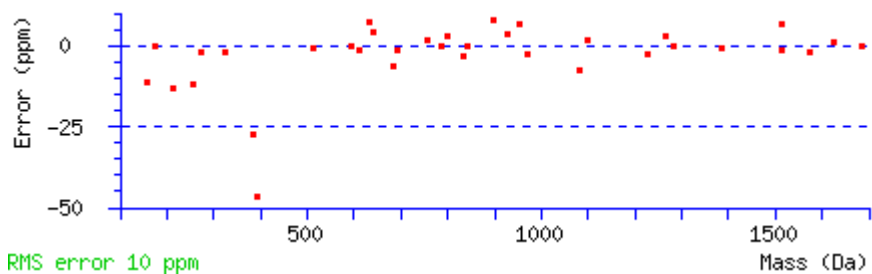
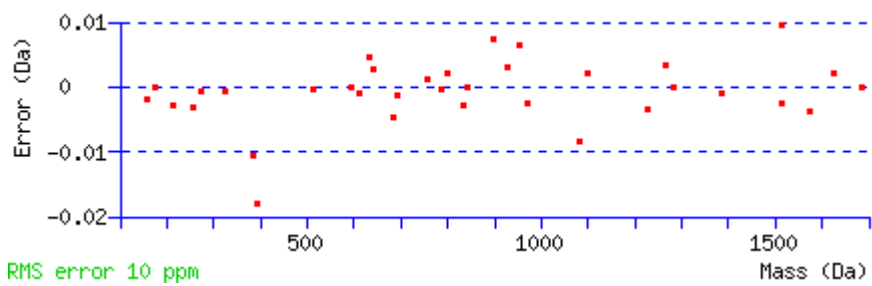
Ions Score:

24

Expect:

1.3

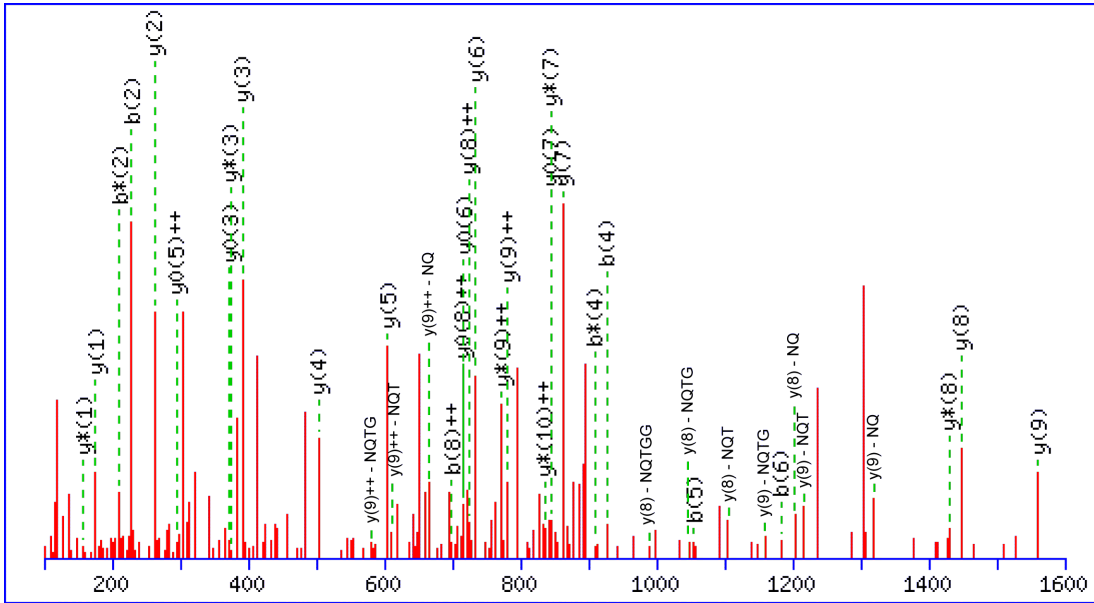
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 100.0757 | 50.5415 | | | | | V | | | | | | | 13 |
| 2 | 213.1598 | 107.0835 | | | | | L | 1797.9817 | 899.4945 | 1780.9552 | 890.9812 | 1779.9712 | 890.4892 | 12 |
| 3 | 326.2438 | 163.6255 | | | | | L | 1684.8977 | 842.9525 | 1667.8711 | 834.4392 | 1666.8871 | 833.9472 | 11 |
| 4 | 383.2653 | 192.1363 | | | | | G | 1571.8136 | 786.4104 | 1554.7871 | 777.8972 | 1553.8030 | 777.4052 | 10 |
| 5 | 512.3079 | 256.6576 | | | 494.2973 | 247.6523 | E | 1514.7921 | 757.8997 | 1497.7656 | 749.3864 | 1496.7816 | 748.8944 | 9 |
| 6 | 613.3556 | 307.1814 | | | 595.3450 | 298.1761 | T | 1385.7496 | 693.3784 | 1368.7230 | 684.8651 | 1367.7390 | 684.3731 | 8 |
| 7 | 670.3770 | 335.6921 | | | 652.3665 | 326.6869 | G | 1284.7019 | 642.8546 | 1267.6753 | 634.3413 | 1266.6913 | 633.8493 | 7 |
| 8 | 798.4720 | 399.7396 | 781.4454 | 391.2264 | 780.4614 | 390.7343 | K | 1227.6804 | 614.3438 | 1210.6539 | 605.8306 | 1209.6698 | 605.3386 | 6 |
| 9 | 927.5146 | 464.2609 | 910.4880 | 455.7477 | 909.5040 | 455.2556 | E | 1099.5854 | 550.2964 | 1082.5589 | 541.7831 | 1081.5749 | 541.2911 | 5 |
| 10 | 1512.8016 | 756.9045 | 1495.7751 | 748.3912 | 1494.7911 | 747.8992 | K | 970.5429 | 485.7751 | 953.5163 | 477.2618 | | | 4 |
| 11 | 1625.8857 | 813.4465 | 1608.8592 | 804.9332 | 1607.8751 | 804.4412 | L | 385.2558 | 193.1315 | 368.2292 | 184.6183 | | | 3 |
| 12 | 1722.9385 | 861.9729 | 1705.9119 | 853.4596 | 1704.9279 | 852.9676 | P | 272.1717 | 136.5895 | 255.1452 | 128.0762 | | | 2 |
| 13 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 54

MS/MS Fragmentation of **VQIKQETIESR**

Found in **Q03933**, Heat shock factor protein 2 OS=Homo sapiens GN=HSF2 PE=1 SV=1



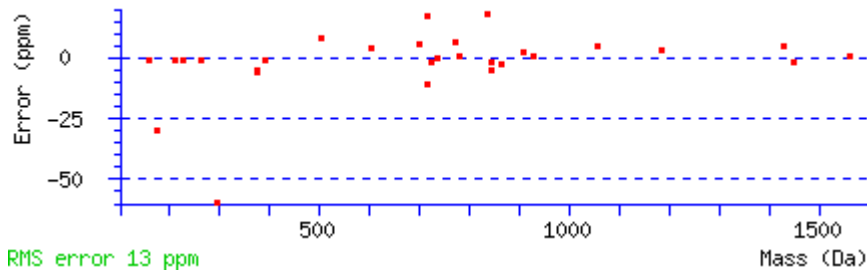
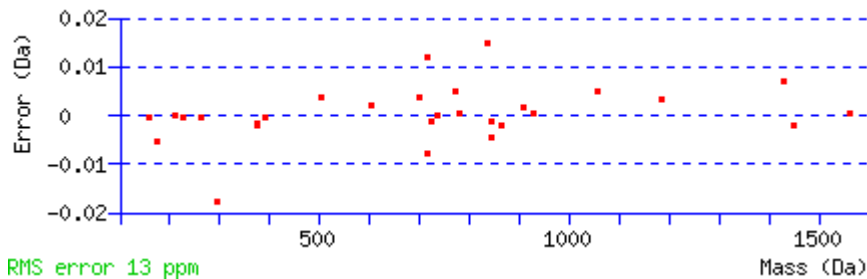
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1786.9173

Variable modifications:

K4 : Sumo 3 (K)

Ions Score: 43 Expect: 0.058

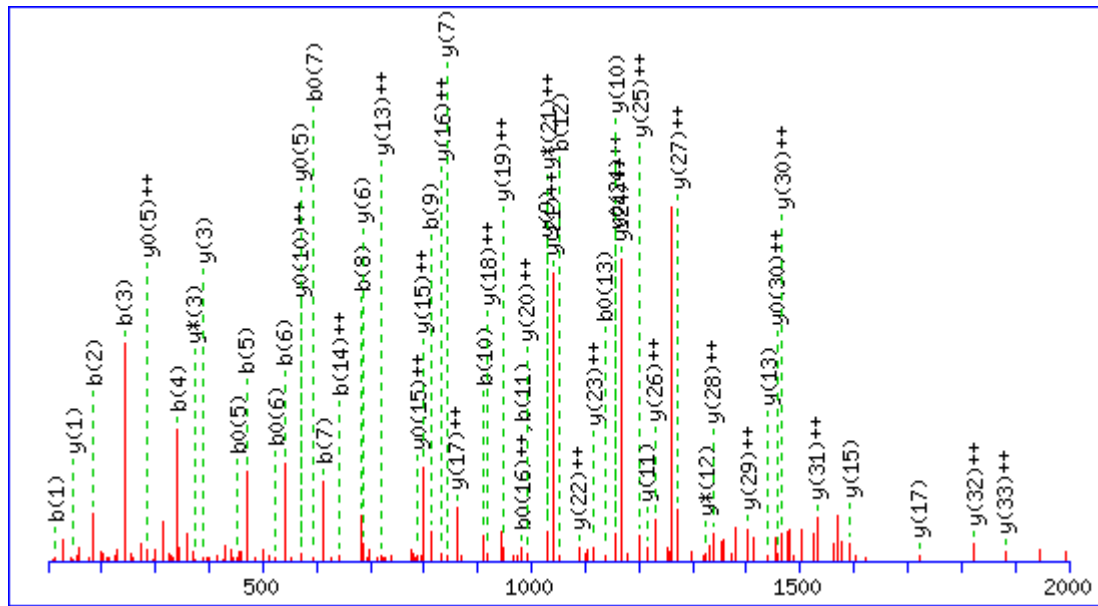
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ^{*++} | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 100.0757 | 50.5415 | | | | | V | | | | | | | 11 |
| 2 | 228.1343 | 114.5708 | 211.1077 | 106.0575 | | | Q | 1688.8562 | 844.9317 | 1671.8297 | 836.4185 | 1670.8456 | 835.9265 | 10 |
| 3 | 341.2183 | 171.1128 | 324.1918 | 162.5995 | | | I | 1560.7976 | 780.9025 | 1543.7711 | 772.3892 | 1542.7871 | 771.8972 | 9 |
| 4 | 926.5054 | 463.7563 | 909.4789 | 455.2431 | | | K | 1447.7136 | 724.3604 | 1430.6870 | 715.8471 | 1429.7030 | 715.3551 | 8 |
| 5 | 1054.5640 | 527.7856 | 1037.5374 | 519.2724 | | | Q | 862.4265 | 431.7169 | 845.3999 | 423.2036 | 844.4159 | 422.7116 | 7 |
| 6 | 1183.6066 | 592.3069 | 1166.5800 | 583.7937 | 1165.5960 | 583.3016 | E | 734.3679 | 367.6876 | 717.3414 | 359.1743 | 716.3573 | 358.6823 | 6 |
| 7 | 1284.6543 | 642.8308 | 1267.6277 | 634.3175 | 1266.6437 | 633.8255 | T | 605.3253 | 303.1663 | 588.2988 | 294.6530 | 587.3148 | 294.1610 | 5 |
| 8 | 1397.7383 | 699.3728 | 1380.7118 | 690.8595 | 1379.7278 | 690.3675 | I | 504.2776 | 252.6425 | 487.2511 | 244.1292 | 486.2671 | 243.6372 | 4 |
| 9 | 1526.7809 | 763.8941 | 1509.7544 | 755.3808 | 1508.7703 | 754.8888 | E | 391.1936 | 196.1004 | 374.1670 | 187.5872 | 373.1830 | 187.0951 | 3 |
| 10 | 1613.8129 | 807.4101 | 1596.7864 | 798.8968 | 1595.8024 | 798.4048 | S | 262.1510 | 131.5791 | 245.1244 | 123.0659 | 244.1404 | 122.5738 | 2 |
| 11 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 55

MS/MS Fragmentation of **AAGVEAAAEEVAATEIKMEEESGAPGVPSGNGAPGPKGEGERPAQNEK**

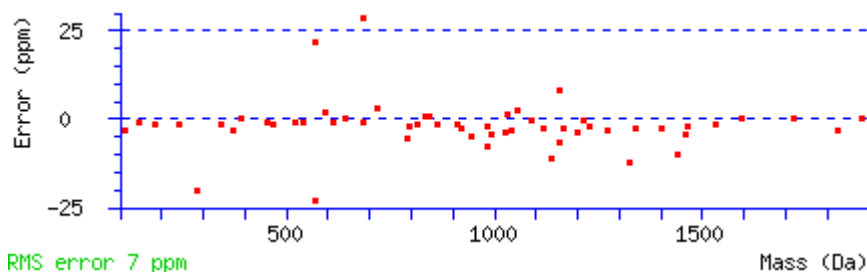
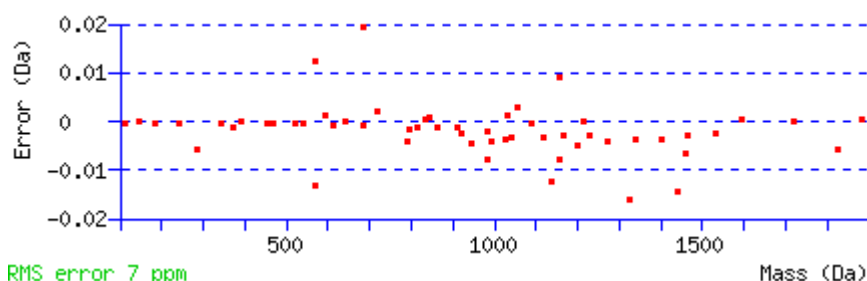
Found in **P52272**, Heterogeneous nuclear ribonucleoprotein M OS=Homo sapiens GN=HNRNPM PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 5043.3751 Variable modifications: N-term : Acetyl (N-term) K16 : Sumo 3 (K) Ions Score: 95 Expect: 3e-06

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 47 |
| 2 | 185.0921 | 93.0497 | | | | | A | 4931.3348 | 2466.1710 | 4914.3083 | 2457.6578 | 4913.3242 | 2457.1658 | 46 |
| 3 | 242.1135 | 121.5604 | | | | | G | 4860.2977 | 2430.6525 | 4843.2711 | 2422.1392 | 4842.2871 | 2421.6472 | 45 |
| 4 | 341.1819 | 171.0946 | | | | | V | 4803.2762 | 2402.1418 | 4786.2497 | 2393.6285 | 4785.2657 | 2393.1365 | 44 |
| 5 | 470.2245 | 235.6159 | | | 452.2140 | 226.6106 | E | 4704.2078 | 2352.6075 | 4687.1813 | 2344.0943 | 4686.1972 | 2343.6023 | 43 |
| 6 | 541.2617 | 271.1345 | | | 523.2511 | 262.1292 | A | 4575.1652 | 2288.0862 | 4558.1387 | 2279.5730 | 4557.1547 | 2279.0810 | 42 |
| 7 | 612.2988 | 306.6530 | | | 594.2882 | 297.6477 | A | 4504.1281 | 2252.5677 | 4487.1016 | 2244.0544 | 4486.1175 | 2243.5624 | 41 |
| 8 | 683.3359 | 342.1716 | | | 665.3253 | 333.1663 | A | 4433.0910 | 2217.0491 | 4416.0644 | 2208.5359 | 4415.0804 | 2208.0439 | 40 |
| 9 | 812.3785 | 406.6929 | | | 794.3679 | 397.6876 | E | 4362.0539 | 2181.5306 | 4345.0273 | 2173.0173 | 4344.0433 | 2172.5253 | 39 |
| 10 | 911.4469 | 456.2271 | | | 893.4363 | 447.2218 | V | 4233.0113 | 2117.0093 | 4215.9847 | 2108.4960 | 4215.0007 | 2108.0040 | 38 |
| 11 | 982.4840 | 491.7456 | | | 964.4734 | 482.7404 | A | 4133.9429 | 2067.4751 | 4116.9163 | 2058.9618 | 4115.9323 | 2058.4698 | 37 |
| 12 | 1053.5211 | 527.2642 | | | 1035.5106 | 518.2589 | A | 4062.9058 | 2031.9565 | 4045.8792 | 2023.4432 | 4044.8952 | 2022.9512 | 36 |
| 13 | 1154.5688 | 577.7880 | | | 1136.5582 | 568.7828 | T | 3991.8686 | 1996.4380 | 3974.8421 | 1987.9247 | 3973.8581 | 1987.4327 | 35 |
| 14 | 1283.6114 | 642.3093 | | | 1265.6008 | 633.3040 | E | 3890.8210 | 1945.9141 | 3873.7944 | 1937.4008 | 3872.8104 | 1936.9088 | 34 |
| 15 | 1396.6955 | 698.8514 | | | 1378.6849 | 689.8461 | I | 3761.7784 | 1881.3928 | 3744.7518 | 1872.8795 | 3743.7678 | 1872.3875 | 33 |
| 16 | 1981.9825 | 991.4949 | 1964.9560 | 982.9816 | 1963.9720 | 982.4896 | K | 3648.6943 | 1824.8508 | 3631.6678 | 1816.3375 | 3630.6837 | 1815.8455 | 32 |
| 17 | 2113.0230 | 1057.0151 | 2095.9965 | 1048.5019 | 2095.0124 | 1048.0099 | M | 3063.4072 | 1532.2073 | 3046.3807 | 1523.6940 | 3045.3967 | 1523.2020 | 31 |
| 18 | 2242.0656 | 1121.5364 | 2225.0391 | 1113.0232 | 2224.0550 | 1112.5312 | E | 2932.3667 | 1466.6870 | 2915.3402 | 1458.1737 | 2914.3562 | 1457.6817 | 30 |
| 19 | 2371.1082 | 1186.0577 | 2354.0816 | 1177.5445 | 2353.0976 | 1177.0525 | E | 2803.3242 | 1402.1657 | 2786.2976 | 1393.6524 | 2785.3136 | 1393.1604 | 29 |
| 20 | 2500.1508 | 1250.5790 | 2483.1242 | 1242.0658 | 2482.1402 | 1241.5738 | E | 2674.2816 | 1337.6444 | 2657.2550 | 1329.1311 | 2656.2710 | 1328.6391 | 28 |
| 21 | 2587.1828 | 1294.0950 | 2570.1563 | 1285.5818 | 2569.1723 | 1285.0898 | S | 2545.2390 | 1273.1231 | 2528.2124 | 1264.6098 | 2527.2284 | 1264.1178 | 27 |
| 22 | 2644.2043 | 1322.6058 | 2627.1777 | 1314.0925 | 2626.1937 | 1313.6005 | G | 2458.2069 | 1229.6071 | 2441.1804 | 1221.0938 | 2440.1964 | 1220.6018 | 26 |
| 23 | 2715.2414 | 1358.1243 | 2698.2148 | 1349.6111 | 2697.2308 | 1349.1191 | A | 2401.1855 | 1201.0964 | 2384.1589 | 1192.5831 | 2383.1749 | 1192.0911 | 25 |
| 24 | 2812.2942 | 1406.6507 | 2795.2676 | 1398.1374 | 2794.2836 | 1397.6454 | P | 2330.1484 | 1165.5778 | 2313.1218 | 1157.0645 | 2312.1378 | 1156.5725 | 24 |
| 25 | 2869.3156 | 1435.1615 | 2852.2891 | 1426.6482 | 2851.3051 | 1426.1562 | G | 2233.0956 | 1117.0514 | 2216.0690 | 1108.5382 | 2215.0850 | 1108.0462 | 23 |
| 26 | 2968.3840 | 1484.6957 | 2951.3575 | 1476.1824 | 2950.3735 | 1475.6904 | V | 2176.0741 | 1088.5407 | 2159.0476 | 1080.0274 | 2158.0636 | 1079.5354 | 22 |
| 27 | 3065.4368 | 1533.2220 | 3048.4103 | 1524.7088 | 3047.4262 | 1524.2168 | P | 2077.0057 | 1039.0065 | 2059.9792 | 1030.4932 | 2058.9952 | 1030.0012 | 21 |
| 28 | 3152.4688 | 1576.7381 | 3135.4423 | 1568.2248 | 3134.4583 | 1567.7328 | S | 1979.9530 | 990.4801 | 1962.9264 | 981.9668 | 1961.9424 | 981.4748 | 20 |
| 29 | 3209.4903 | 1605.2488 | 3192.4637 | 1596.7355 | 3191.4797 | 1596.2435 | G | 1892.9209 | 946.9641 | 1875.8944 | 938.4508 | 1874.9104 | 937.9588 | 19 |

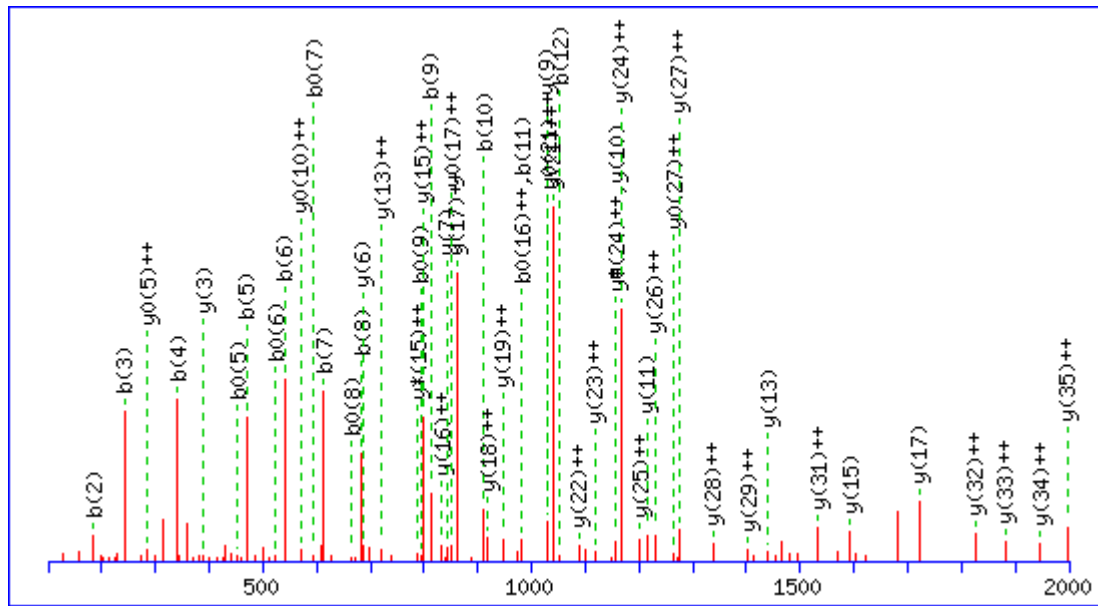
| | | | | | | | | | | | | | | |
|----|-----------|-----------|-----------|-----------|-----------|-----------|---|-----------|----------|-----------|----------|-----------|----------|----|
| 30 | 3323.5332 | 1662.2702 | 3306.5067 | 1653.7570 | 3305.5227 | 1653.2650 | N | 1835.8995 | 918.4534 | 1818.8729 | 909.9401 | 1817.8889 | 909.4481 | 18 |
| 31 | 3380.5547 | 1690.7810 | 3363.5281 | 1682.2677 | 3362.5441 | 1681.7757 | G | 1721.8565 | 861.4319 | 1704.8300 | 852.9186 | 1703.8460 | 852.4266 | 17 |
| 32 | 3451.5918 | 1726.2995 | 3434.5653 | 1717.7863 | 3433.5812 | 1717.2943 | A | 1664.8351 | 832.9212 | 1647.8085 | 824.4079 | 1646.8245 | 823.9159 | 16 |
| 33 | 3548.6446 | 1774.8259 | 3531.6180 | 1766.3126 | 3530.6340 | 1765.8206 | P | 1593.7980 | 797.4026 | 1576.7714 | 788.8893 | 1575.7874 | 788.3973 | 15 |
| 34 | 3605.6660 | 1803.3367 | 3588.6395 | 1794.8234 | 3587.6555 | 1794.3314 | G | 1496.7452 | 748.8762 | 1479.7186 | 740.3630 | 1478.7346 | 739.8710 | 14 |
| 35 | 3702.7188 | 1851.8630 | 3685.6922 | 1843.3498 | 3684.7082 | 1842.8578 | P | 1439.7237 | 720.3655 | 1422.6972 | 711.8522 | 1421.7132 | 711.3602 | 13 |
| 36 | 3830.8138 | 1915.9105 | 3813.7872 | 1907.3972 | 3812.8032 | 1906.9052 | K | 1342.6710 | 671.8391 | 1325.6444 | 663.3258 | 1324.6604 | 662.8338 | 12 |
| 37 | 3887.8352 | 1944.4212 | 3870.8087 | 1935.9080 | 3869.8247 | 1935.4160 | G | 1214.5760 | 607.7916 | 1197.5495 | 599.2784 | 1196.5654 | 598.7864 | 11 |
| 38 | 4016.8778 | 2008.9425 | 3999.8513 | 2000.4293 | 3998.8672 | 1999.9373 | E | 1157.5545 | 579.2809 | 1140.5280 | 570.7676 | 1139.5440 | 570.2756 | 10 |
| 39 | 4073.8993 | 2037.4533 | 4056.8727 | 2028.9400 | 4055.8887 | 2028.4480 | G | 1028.5119 | 514.7596 | 1011.4854 | 506.2463 | 1010.5014 | 505.7543 | 9 |
| 40 | 4202.9419 | 2101.9746 | 4185.9153 | 2093.4613 | 4184.9313 | 2092.9693 | E | 971.4905 | 486.2489 | 954.4639 | 477.7356 | 953.4799 | 477.2436 | 8 |
| 41 | 4359.0430 | 2180.0251 | 4342.0164 | 2171.5119 | 4341.0324 | 2171.0198 | R | 842.4479 | 421.7276 | 825.4213 | 413.2143 | 824.4373 | 412.7223 | 7 |
| 42 | 4456.0957 | 2228.5515 | 4439.0692 | 2220.0382 | 4438.0852 | 2219.5462 | P | 686.3468 | 343.6770 | 669.3202 | 335.1638 | 668.3362 | 334.6717 | 6 |
| 43 | 4527.1329 | 2264.0701 | 4510.1063 | 2255.5568 | 4509.1223 | 2255.0648 | A | 589.2940 | 295.1506 | 572.2675 | 286.6374 | 571.2835 | 286.1454 | 5 |
| 44 | 4655.1914 | 2328.0994 | 4638.1649 | 2319.5861 | 4637.1809 | 2319.0941 | Q | 518.2569 | 259.6321 | 501.2304 | 251.1188 | 500.2463 | 250.6268 | 4 |
| 45 | 4769.2344 | 2385.1208 | 4752.2078 | 2376.6075 | 4751.2238 | 2376.1155 | N | 390.1983 | 195.6028 | 373.1718 | 187.0895 | 372.1878 | 186.5975 | 3 |
| 46 | 4898.2770 | 2449.6421 | 4881.2504 | 2441.1288 | 4880.2664 | 2440.6368 | E | 276.1554 | 138.5813 | 259.1288 | 130.0681 | 258.1448 | 129.5761 | 2 |
| 47 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 56

MS/MS Fragmentation of **AAGVEAAAEVAATEIKMEEESGAPGVPSGNGAPGPKGEGERPAQNEK**

Found in **P52272**, Heterogeneous nuclear ribonucleoprotein M OS=Homo sapiens GN=HNRNPM PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 5044.3591

Variable modifications:

N-term : Acetyl (N-term)

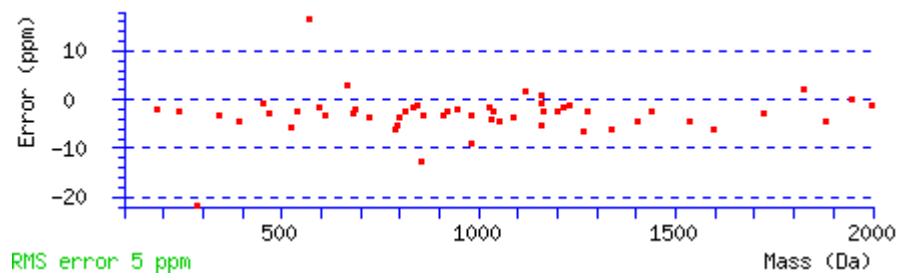
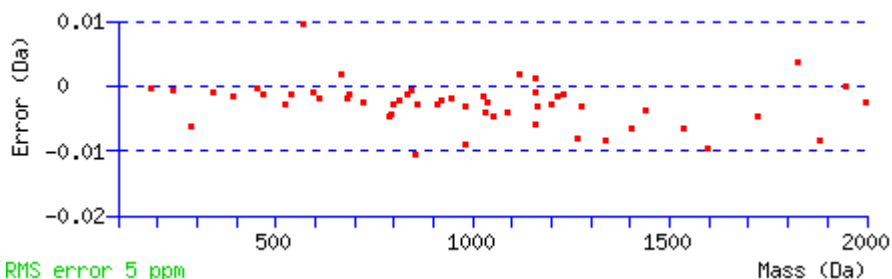
K16 : Sumo 3 (K)

N30 : Deamidated (NQ)

Ions Score: 130 Expect: 9.7e-10

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 47 |
| 2 | 185.0921 | 93.0497 | | | | | A | 4932.3188 | 2466.6630 | 4915.2923 | 2458.1498 | 4914.3083 | 2457.6578 | 46 |
| 3 | 242.1135 | 121.5604 | | | | | G | 4861.2817 | 2431.1445 | 4844.2552 | 2422.6312 | 4843.2711 | 2422.1392 | 45 |
| 4 | 341.1819 | 171.0946 | | | | | V | 4804.2602 | 2402.6338 | 4787.2337 | 2394.1205 | 4786.2497 | 2393.6285 | 44 |
| 5 | 470.2245 | 235.6159 | | | 452.2140 | 226.6106 | E | 4705.1918 | 2353.0996 | 4688.1653 | 2344.5863 | 4687.1813 | 2344.0943 | 43 |
| 6 | 541.2617 | 271.1345 | | | 523.2511 | 262.1292 | A | 4576.1492 | 2288.5783 | 4559.1227 | 2280.0650 | 4558.1387 | 2279.5730 | 42 |
| 7 | 612.2988 | 306.6530 | | | 594.2882 | 297.6477 | A | 4505.1121 | 2253.0597 | 4488.0856 | 2244.5464 | 4487.1016 | 2244.0544 | 41 |
| 8 | 683.3359 | 342.1716 | | | 665.3253 | 333.1663 | A | 4434.0750 | 2217.5411 | 4417.0485 | 2209.0279 | 4416.0644 | 2208.5359 | 40 |
| 9 | 812.3785 | 406.6929 | | | 794.3679 | 397.6876 | E | 4363.0379 | 2182.0226 | 4346.0113 | 2173.5093 | 4345.0273 | 2173.0173 | 39 |
| 10 | 911.4469 | 456.2271 | | | 893.4363 | 447.2218 | V | 4233.9953 | 2117.5013 | 4216.9688 | 2108.9880 | 4215.9847 | 2108.4960 | 38 |
| 11 | 982.4840 | 491.7456 | | | 964.4734 | 482.7404 | A | 4134.9269 | 2067.9671 | 4117.9003 | 2059.4538 | 4116.9163 | 2058.9618 | 37 |
| 12 | 1053.5211 | 527.2642 | | | 1035.5106 | 518.2589 | A | 4063.8898 | 2032.4485 | 4046.8632 | 2023.9352 | 4045.8792 | 2023.4432 | 36 |
| 13 | 1154.5688 | 577.7880 | | | 1136.5582 | 568.7828 | T | 3992.8527 | 1996.9300 | 3975.8261 | 1988.4167 | 3974.8421 | 1987.9247 | 35 |
| 14 | 1283.6114 | 642.3093 | | | 1265.6008 | 633.3040 | E | 3891.8050 | 1946.4061 | 3874.7784 | 1937.8929 | 3873.7944 | 1937.4008 | 34 |
| 15 | 1396.6955 | 698.8514 | | | 1378.6849 | 689.8461 | I | 3762.7624 | 1881.8848 | 3745.7358 | 1873.3716 | 3744.7518 | 1872.8795 | 33 |
| 16 | 1981.9825 | 991.4949 | 1964.9560 | 982.9816 | 1963.9720 | 982.4896 | K | 3649.6783 | 1825.3428 | 3632.6518 | 1816.8295 | 3631.6678 | 1816.3375 | 32 |
| 17 | 2113.0230 | 1057.0151 | 2095.9965 | 1048.5019 | 2095.0124 | 1048.0099 | M | 3064.3912 | 1532.6993 | 3047.3647 | 1524.1860 | 3046.3807 | 1523.6940 | 31 |
| 18 | 2242.0656 | 1121.5364 | 2225.0391 | 1113.0232 | 2224.0550 | 1112.5312 | E | 2933.3508 | 1467.1790 | 2916.3242 | 1458.6657 | 2915.3402 | 1458.1737 | 30 |
| 19 | 2371.1082 | 1186.0577 | 2354.0816 | 1177.5445 | 2353.0976 | 1177.0525 | E | 2804.3082 | 1402.6577 | 2787.2816 | 1394.1444 | 2786.2976 | 1393.6524 | 29 |
| 20 | 2500.1508 | 1250.5790 | 2483.1242 | 1242.0658 | 2482.1402 | 1241.5738 | E | 2675.2656 | 1338.1364 | 2658.2390 | 1329.6232 | 2657.2550 | 1329.1311 | 28 |
| 21 | 2587.1828 | 1294.0950 | 2570.1563 | 1285.5818 | 2569.1723 | 1285.0898 | S | 2546.2230 | 1273.6151 | 2529.1964 | 1265.1019 | 2528.2124 | 1264.6098 | 27 |
| 22 | 2644.2043 | 1322.6058 | 2627.1777 | 1314.0925 | 2626.1937 | 1313.6005 | G | 2459.1910 | 1230.0991 | 2442.1644 | 1221.5858 | 2441.1804 | 1221.0938 | 26 |
| 23 | 2715.2414 | 1358.1243 | 2698.2148 | 1349.6111 | 2697.2308 | 1349.1191 | A | 2402.1695 | 1201.5884 | 2385.1429 | 1193.0751 | 2384.1589 | 1192.5831 | 25 |
| 24 | 2812.2942 | 1406.6507 | 2795.2676 | 1398.1374 | 2794.2836 | 1397.6454 | P | 2331.1324 | 1166.0698 | 2314.1058 | 1157.5566 | 2313.1218 | 1157.0645 | 24 |
| 25 | 2869.3156 | 1435.1615 | 2852.2891 | 1426.6482 | 2851.3051 | 1426.1562 | G | 2234.0796 | 1117.5434 | 2217.0531 | 1109.0302 | 2216.0690 | 1108.5382 | 23 |

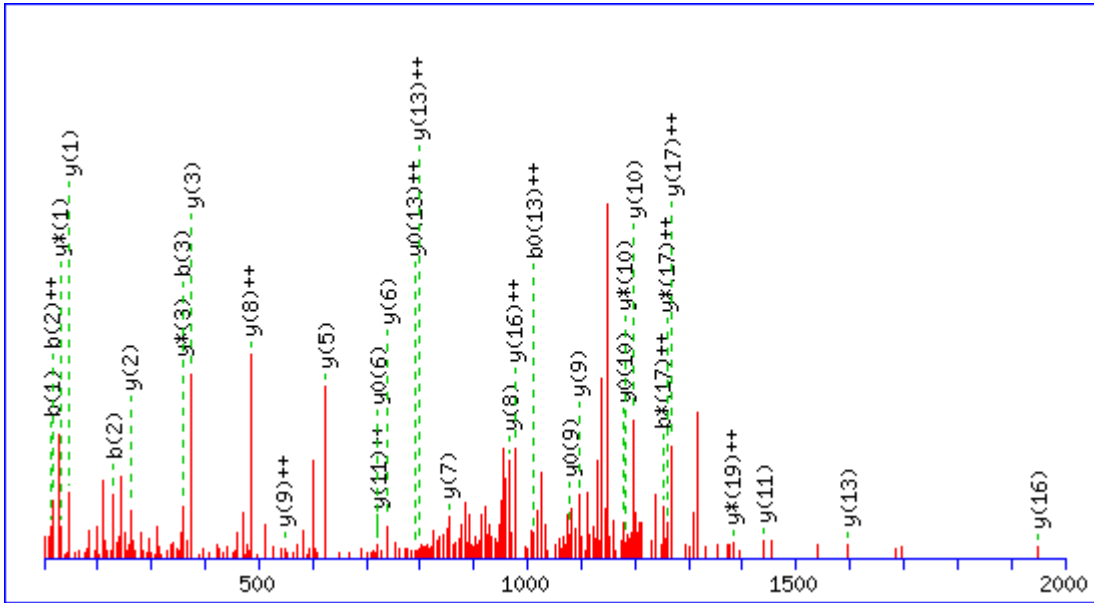
| | | | | | | | | | | | | | | |
|----|-----------|-----------|-----------|-----------|-----------|-----------|---|-----------|-----------|-----------|-----------|-----------|-----------|----|
| 26 | 2968.3840 | 1484.6957 | 2951.3575 | 1476.1824 | 2950.3735 | 1475.6904 | V | 2177.0582 | 1089.0327 | 2160.0316 | 1080.5194 | 2159.0476 | 1080.0274 | 22 |
| 27 | 3065.4368 | 1533.2220 | 3048.4103 | 1524.7088 | 3047.4262 | 1524.2168 | P | 2077.9897 | 1039.4985 | 2060.9632 | 1030.9852 | 2059.9792 | 1030.4932 | 21 |
| 28 | 3152.4688 | 1576.7381 | 3135.4423 | 1568.2248 | 3134.4583 | 1567.7328 | S | 1980.9370 | 990.9721 | 1963.9104 | 982.4589 | 1962.9264 | 981.9668 | 20 |
| 29 | 3209.4903 | 1605.2488 | 3192.4637 | 1596.7355 | 3191.4797 | 1596.2435 | G | 1893.9049 | 947.4561 | 1876.8784 | 938.9428 | 1875.8944 | 938.4508 | 19 |
| 30 | 3324.5172 | 1662.7623 | 3307.4907 | 1654.2490 | 3306.5067 | 1653.7570 | N | 1836.8835 | 918.9454 | 1819.8569 | 910.4321 | 1818.8729 | 909.9401 | 18 |
| 31 | 3381.5387 | 1691.2730 | 3364.5122 | 1682.7597 | 3363.5281 | 1682.2677 | G | 1721.8565 | 861.4319 | 1704.8300 | 852.9186 | 1703.8460 | 852.4266 | 17 |
| 32 | 3452.5758 | 1726.7915 | 3435.5493 | 1718.2783 | 3434.5653 | 1717.7863 | A | 1664.8351 | 832.9212 | 1647.8085 | 824.4079 | 1646.8245 | 823.9159 | 16 |
| 33 | 3549.6286 | 1775.3179 | 3532.6020 | 1766.8047 | 3531.6180 | 1766.3126 | P | 1593.7980 | 797.4026 | 1576.7714 | 788.8893 | 1575.7874 | 788.3973 | 15 |
| 34 | 3606.6500 | 1803.8287 | 3589.6235 | 1795.3154 | 3588.6395 | 1794.8234 | G | 1496.7452 | 748.8762 | 1479.7186 | 740.3630 | 1478.7346 | 739.8710 | 14 |
| 35 | 3703.7028 | 1852.3550 | 3686.6763 | 1843.8418 | 3685.6922 | 1843.3498 | P | 1439.7237 | 720.3655 | 1422.6972 | 711.8522 | 1421.7132 | 711.3602 | 13 |
| 36 | 3831.7978 | 1916.4025 | 3814.7712 | 1907.8892 | 3813.7872 | 1907.3972 | K | 1342.6710 | 671.8391 | 1325.6444 | 663.3258 | 1324.6604 | 662.8338 | 12 |
| 37 | 3888.8192 | 1944.9133 | 3871.7927 | 1936.4000 | 3870.8087 | 1935.9080 | G | 1214.5760 | 607.7916 | 1197.5495 | 599.2784 | 1196.5654 | 598.7864 | 11 |
| 38 | 4017.8618 | 2009.4346 | 4000.8353 | 2000.9213 | 3999.8513 | 2000.4293 | E | 1157.5545 | 579.2809 | 1140.5280 | 570.7676 | 1139.5440 | 570.2756 | 10 |
| 39 | 4074.8833 | 2037.9453 | 4057.8567 | 2029.4320 | 4056.8727 | 2028.9400 | G | 1028.5119 | 514.7596 | 1011.4854 | 506.2463 | 1010.5014 | 505.7543 | 9 |
| 40 | 4203.9259 | 2102.4666 | 4186.8993 | 2093.9533 | 4185.9153 | 2093.4613 | E | 971.4905 | 486.2489 | 954.4639 | 477.7356 | 953.4799 | 477.2436 | 8 |
| 41 | 4360.0270 | 2180.5171 | 4343.0004 | 2172.0039 | 4342.0164 | 2171.5119 | R | 842.4479 | 421.7276 | 825.4213 | 413.2143 | 824.4373 | 412.7223 | 7 |
| 42 | 4457.0798 | 2229.0435 | 4440.0532 | 2220.5302 | 4439.0692 | 2220.0382 | P | 686.3468 | 343.6770 | 669.3202 | 335.1638 | 668.3362 | 334.6717 | 6 |
| 43 | 4528.1169 | 2264.5621 | 4511.0903 | 2256.0488 | 4510.1063 | 2255.5568 | A | 589.2940 | 295.1506 | 572.2675 | 286.6374 | 571.2835 | 286.1454 | 5 |
| 44 | 4656.1755 | 2328.5914 | 4639.1489 | 2320.0781 | 4638.1649 | 2319.5861 | Q | 518.2569 | 259.6321 | 501.2304 | 251.1188 | 500.2463 | 250.6268 | 4 |
| 45 | 4770.2184 | 2385.6128 | 4753.1918 | 2377.0996 | 4752.2078 | 2376.6075 | N | 390.1983 | 195.6028 | 373.1718 | 187.0895 | 372.1878 | 186.5975 | 3 |
| 46 | 4899.2610 | 2450.1341 | 4882.2344 | 2441.6208 | 4881.2504 | 2441.1288 | E | 276.1554 | 138.5813 | 259.1288 | 130.0681 | 258.1448 | 129.5761 | 2 |
| 47 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 57

MS/MS Fragmentation of **ADEKPKEGVKTENNDHILNK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2891.4009

Variable modifications:

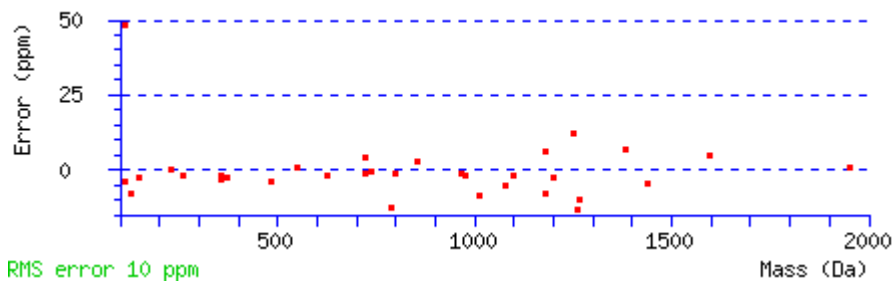
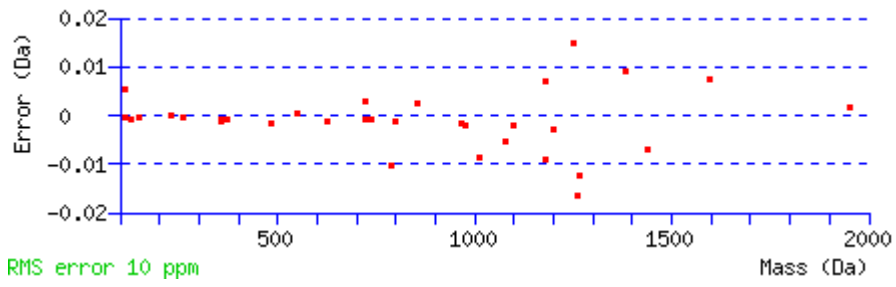
N-term : Acetyl (N-term)

K4 : Sumo 3 (K)

K10 : GlyGly (K)

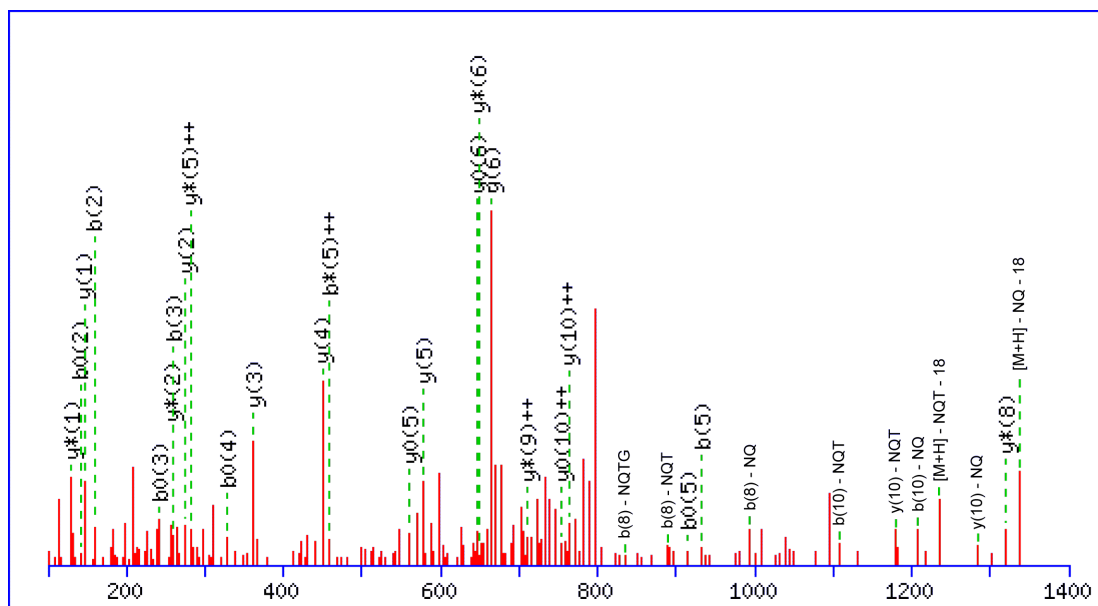
Ions Score: 37 Expect: 0.66

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0550 | 57.5311 | | | | | A | | | | | | | 20 |
| 2 | 229.0819 | 115.0446 | | | 211.0713 | 106.0393 | D | 2779.3605 | 1390.1839 | 2762.3340 | 1381.6706 | 2761.3500 | 1381.1786 | 19 |
| 3 | 358.1245 | 179.5659 | | | 340.1139 | 170.5606 | E | 2664.3336 | 1332.6704 | 2647.3070 | 1324.1572 | 2646.3230 | 1323.6652 | 18 |
| 4 | 943.4116 | 472.2094 | 926.3850 | 463.6961 | 925.4010 | 463.2041 | K | 2535.2910 | 1268.1491 | 2518.2645 | 1259.6359 | 2517.2804 | 1259.1439 | 17 |
| 5 | 1040.4643 | 520.7358 | 1023.4378 | 512.2225 | 1022.4538 | 511.7305 | P | 1950.0039 | 975.5056 | 1932.9774 | 966.9923 | 1931.9934 | 966.5003 | 16 |
| 6 | 1168.5593 | 584.7833 | 1151.5327 | 576.2700 | 1150.5487 | 575.7780 | K | 1852.9512 | 926.9792 | 1835.9246 | 918.4659 | 1834.9406 | 917.9739 | 15 |
| 7 | 1297.6019 | 649.3046 | 1280.5753 | 640.7913 | 1279.5913 | 640.2993 | E | 1724.8562 | 862.9317 | 1707.8297 | 854.4185 | 1706.8456 | 853.9265 | 14 |
| 8 | 1354.6233 | 677.8153 | 1337.5968 | 669.3020 | 1336.6128 | 668.8100 | G | 1595.8136 | 798.4104 | 1578.7871 | 789.8972 | 1577.8030 | 789.4052 | 13 |
| 9 | 1453.6918 | 727.3495 | 1436.6652 | 718.8362 | 1435.6812 | 718.3442 | V | 1538.7921 | 769.8997 | 1521.7656 | 761.3864 | 1520.7816 | 760.8944 | 12 |
| 10 | 1695.8297 | 848.4185 | 1678.8031 | 839.9052 | 1677.8191 | 839.4132 | K | 1439.7237 | 720.3655 | 1422.6972 | 711.8522 | 1421.7132 | 711.3602 | 11 |
| 11 | 1796.8773 | 898.9423 | 1779.8508 | 890.4290 | 1778.8668 | 889.9370 | T | 1197.5858 | 599.2966 | 1180.5593 | 590.7833 | 1179.5753 | 590.2913 | 10 |
| 12 | 1925.9199 | 963.4636 | 1908.8934 | 954.9503 | 1907.9094 | 954.4583 | E | 1096.5382 | 548.7727 | 1079.5116 | 540.2594 | 1078.5276 | 539.7674 | 9 |
| 13 | 2039.9629 | 1020.4851 | 2022.9363 | 1011.9718 | 2021.9523 | 1011.4798 | N | 967.4956 | 484.2514 | 950.4690 | 475.7381 | 949.4850 | 475.2461 | 8 |
| 14 | 2154.0058 | 1077.5065 | 2136.9792 | 1068.9933 | 2135.9952 | 1068.5012 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 15 | 2269.0327 | 1135.0200 | 2252.0062 | 1126.5067 | 2251.0222 | 1126.0147 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2406.0916 | 1203.5495 | 2389.0651 | 1195.0362 | 2388.0811 | 1194.5442 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2519.1757 | 1260.0915 | 2502.1491 | 1251.5782 | 2501.1651 | 1251.0862 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2633.2186 | 1317.1130 | 2616.1921 | 1308.5997 | 2615.2081 | 1308.1077 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2746.3027 | 1373.6550 | 2729.2761 | 1365.1417 | 2728.2921 | 1364.6497 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



MS/MS Fragmentation of **ASTSKSESSQK**

Found in **P62753**, 40S ribosomal protein S6 OS=Homo sapiens GN=RPS6 PE=1 SV=1



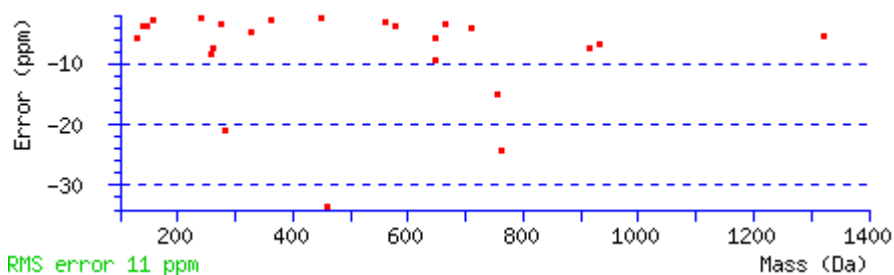
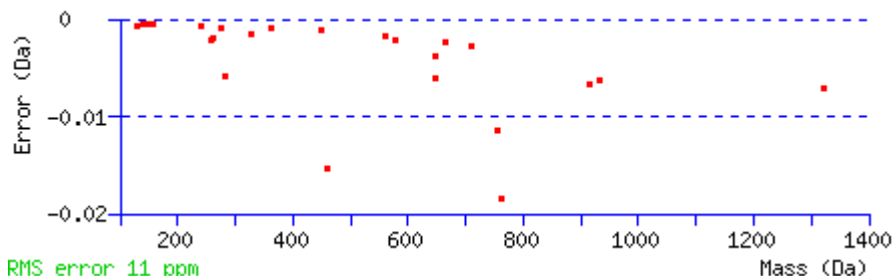
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1595.7387

Variable modifications:

K5 : Sumo 3 (K)

Ions Score: 14 Expect: 54

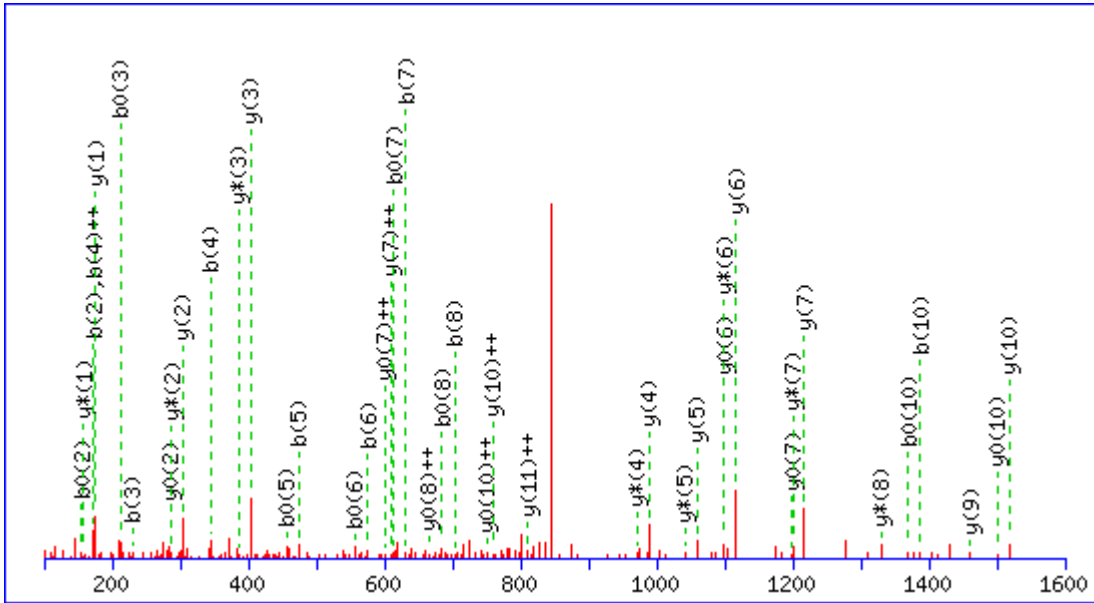
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------------|-----------------|----------------|------------------|-----------------|------------------|------|-----------------|-----------------|------------------|------------------|-----------------|------------------|----|
| 1 | 72.0444 | 36.5258 | | | | | A | | | | | | | 11 |
| 2 | 159.0764 | 80.0418 | | | 141.0659 | 71.0366 | S | 1525.7089 | 763.3581 | 1508.6823 | 754.8448 | 1507.6983 | 754.3528 | 10 |
| 3 | 260.1241 | 130.5657 | | | 242.1135 | 121.5604 | T | 1438.6768 | 719.8421 | 1421.6503 | 711.3288 | 1420.6663 | 710.8368 | 9 |
| 4 | 347.1561 | 174.0817 | | | 329.1456 | 165.0764 | S | 1337.6292 | 669.3182 | 1320.6026 | 660.8049 | 1319.6186 | 660.3129 | 8 |
| 5 | 932.4432 | 466.7252 | 915.4167 | 458.2120 | 914.4326 | 457.7200 | K | 1250.5971 | 625.8022 | 1233.5706 | 617.2889 | 1232.5866 | 616.7969 | 7 |
| 6 | 1019.4752 | 510.2413 | 1002.4487 | 501.7280 | 1001.4647 | 501.2360 | S | 665.3101 | 333.1587 | 648.2835 | 324.6454 | 647.2995 | 324.1534 | 6 |
| 7 | 1148.5178 | 574.7625 | 1131.4913 | 566.2493 | 1130.5073 | 565.7573 | E | 578.2780 | 289.6427 | 561.2515 | 281.1294 | 560.2675 | 280.6374 | 5 |
| 8 | 1235.5498 | 618.2786 | 1218.5233 | 609.7653 | 1217.5393 | 609.2733 | S | 449.2354 | 225.1214 | 432.2089 | 216.6081 | 431.2249 | 216.1161 | 4 |
| 9 | 1322.5819 | 661.7946 | 1305.5553 | 653.2813 | 1304.5713 | 652.7893 | S | 362.2034 | 181.6053 | 345.1769 | 173.0921 | 344.1928 | 172.6001 | 3 |
| 10 | 1450.6405 | 725.8239 | 1433.6139 | 717.3106 | 1432.6299 | 716.8186 | Q | 275.1714 | 138.0893 | 258.1448 | 129.5761 | | | 2 |
| 11 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 59

MS/MS Fragmentation of **ATGDETGAKVER**

Found in **P61247**, 40S ribosomal protein S3a OS=Homo sapiens GN=RPS3A PE=1 SV=2



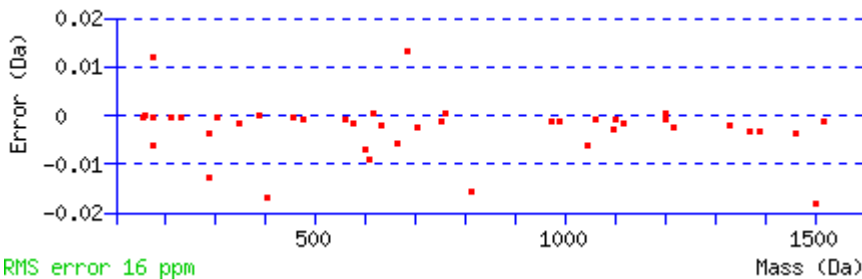
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1689.7918

Variable modifications:

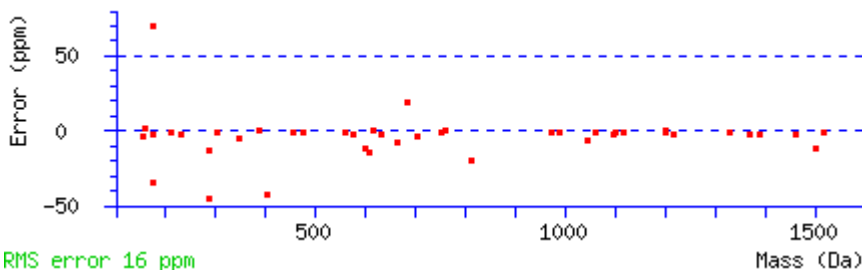
K9 : Sumo 3 (K)

Ions Score: 53 Expect: 0.0086

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 72.0444 | 36.5258 | | | | | A | | | | | | | 12 |
| 2 | 173.0921 | 87.0497 | | | 155.0815 | 78.0444 | T | 1619.7620 | 810.3846 | 1602.7354 | 801.8713 | 1601.7514 | 801.3793 | 11 |
| 3 | 230.1135 | 115.5604 | | | 212.1030 | 106.5551 | G | 1518.7143 | 759.8608 | 1501.6877 | 751.3475 | 1500.7037 | 750.8555 | 10 |
| 4 | 345.1405 | 173.0739 | | | 327.1299 | 164.0686 | D | 1461.6928 | 731.3501 | 1444.6663 | 722.8368 | 1443.6823 | 722.3448 | 9 |
| 5 | 474.1831 | 237.5952 | | | 456.1725 | 228.5899 | E | 1346.6659 | 673.8366 | 1329.6393 | 665.3233 | 1328.6553 | 664.8313 | 8 |
| 6 | 575.2307 | 288.1190 | | | 557.2202 | 279.1137 | T | 1217.6233 | 609.3153 | 1200.5967 | 600.8020 | 1199.6127 | 600.3100 | 7 |
| 7 | 632.2522 | 316.6297 | | | 614.2416 | 307.6245 | G | 1116.5756 | 558.7914 | 1099.5491 | 550.2782 | 1098.5650 | 549.7862 | 6 |
| 8 | 703.2893 | 352.1483 | | | 685.2788 | 343.1430 | A | 1059.5541 | 530.2807 | 1042.5276 | 521.7674 | 1041.5436 | 521.2754 | 5 |
| 9 | 1288.5764 | 644.7918 | 1271.5499 | 636.2786 | 1270.5658 | 635.7866 | K | 988.5170 | 494.7622 | 971.4905 | 486.2489 | 970.5065 | 485.7569 | 4 |
| 10 | 1387.6448 | 694.3260 | 1370.6183 | 685.8128 | 1369.6342 | 685.3208 | V | 403.2300 | 202.1186 | 386.2034 | 193.6053 | 385.2194 | 193.1133 | 3 |
| 11 | 1516.6874 | 758.8473 | 1499.6609 | 750.3341 | 1498.6768 | 749.8421 | E | 304.1615 | 152.5844 | 287.1350 | 144.0711 | 286.1510 | 143.5791 | 2 |
| 12 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



RMS error 16 ppm

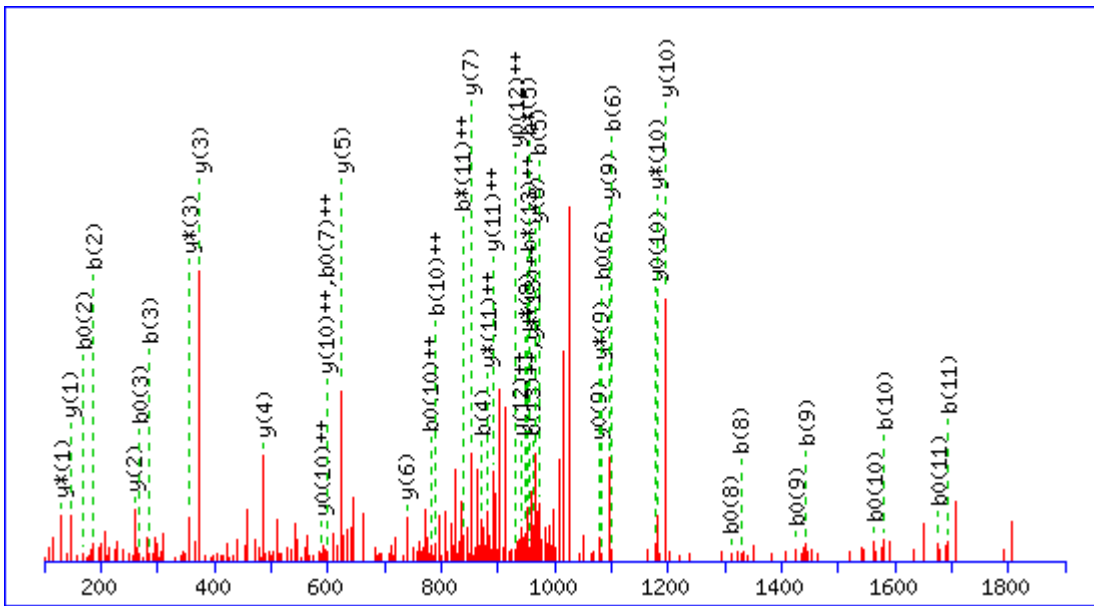


RMS error 16 ppm

IDENTIFICATION 60

MS/MS Fragmentation of **EGVKTENNDHILK**

Found in **P61956**, Small ubiquitin-related modifier 2 OS=Homo sapiens GN=SUMO2 PE=1 SV=3



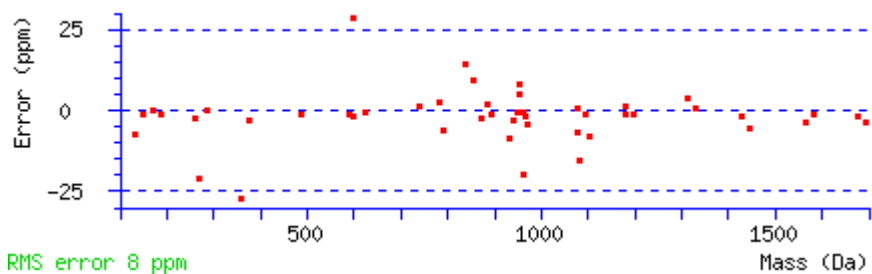
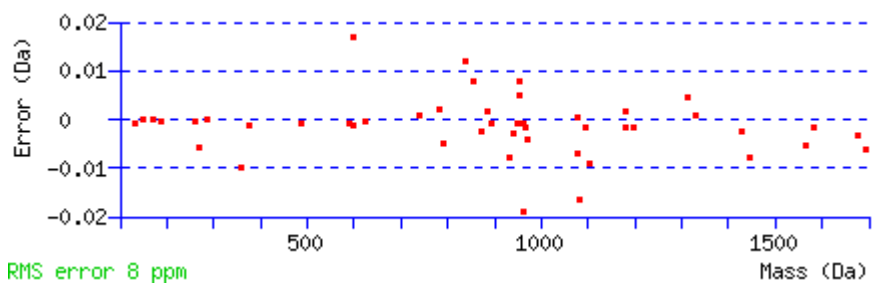
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2066.9981

Variable modifications:

K4 : Sumo 3 (K)

Ions Score: 34 Expect: 0.89

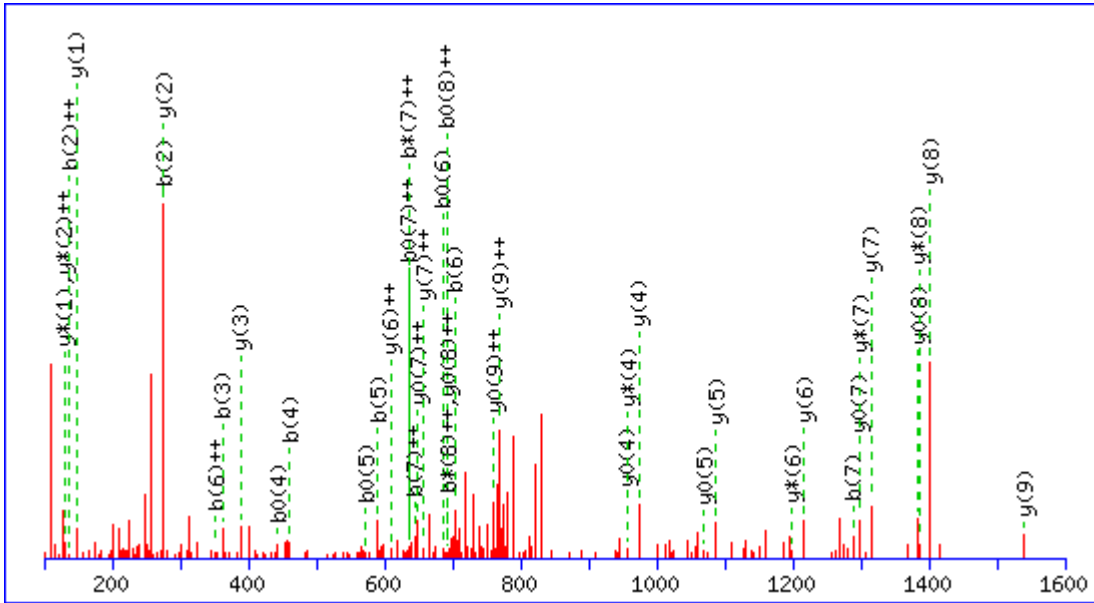
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 130.0499 | 65.5286 | | | 112.0393 | 56.5233 | E | | | | | | | 14 |
| 2 | 187.0713 | 94.0393 | | | 169.0608 | 85.0340 | G | 1938.9628 | 969.9850 | 1921.9362 | 961.4718 | 1920.9522 | 960.9798 | 13 |
| 3 | 286.1397 | 143.5735 | | | 268.1292 | 134.5682 | V | 1881.9413 | 941.4743 | 1864.9148 | 932.9610 | 1863.9308 | 932.4690 | 12 |
| 4 | 871.4268 | 436.2170 | 854.4003 | 427.7038 | 853.4163 | 427.2118 | K | 1782.8729 | 891.9401 | 1765.8464 | 883.4268 | 1764.8623 | 882.9348 | 11 |
| 5 | 972.4745 | 486.7409 | 955.4480 | 478.2276 | 954.4639 | 477.7356 | T | 1197.5858 | 599.2966 | 1180.5593 | 590.7833 | 1179.5753 | 590.2913 | 10 |
| 6 | 1101.5171 | 551.2622 | 1084.4905 | 542.7489 | 1083.5065 | 542.2569 | E | 1096.5382 | 548.7727 | 1079.5116 | 540.2594 | 1078.5276 | 539.7674 | 9 |
| 7 | 1215.5600 | 608.2836 | 1198.5335 | 599.7704 | 1197.5495 | 599.2784 | N | 967.4956 | 484.2514 | 950.4690 | 475.7381 | 949.4850 | 475.2461 | 8 |
| 8 | 1329.6029 | 665.3051 | 1312.5764 | 656.7918 | 1311.5924 | 656.2998 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 9 | 1444.6299 | 722.8186 | 1427.6033 | 714.3053 | 1426.6193 | 713.8133 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 10 | 1581.6888 | 791.3480 | 1564.6623 | 782.8348 | 1563.6782 | 782.3428 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 11 | 1694.7729 | 847.8901 | 1677.7463 | 839.3768 | 1676.7623 | 838.8848 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 12 | 1808.8158 | 904.9115 | 1791.7892 | 896.3983 | 1790.8052 | 895.9063 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 13 | 1921.8999 | 961.4536 | 1904.8733 | 952.9403 | 1903.8893 | 952.4483 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 14 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 61

MS/MS Fragmentation of **HHSVEIKIEK**

Found in **Q14151**, Scaffold attachment factor B2 OS=Homo sapiens GN=SAFB2 PE=1 SV=1



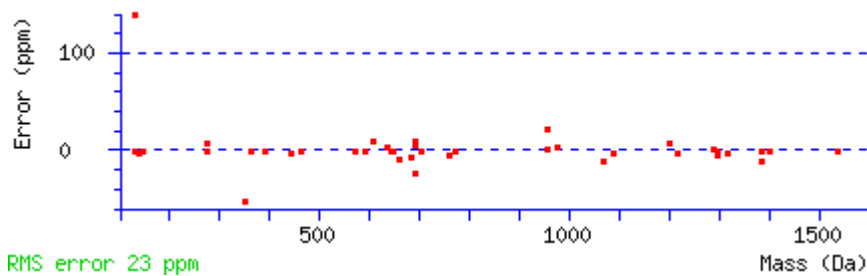
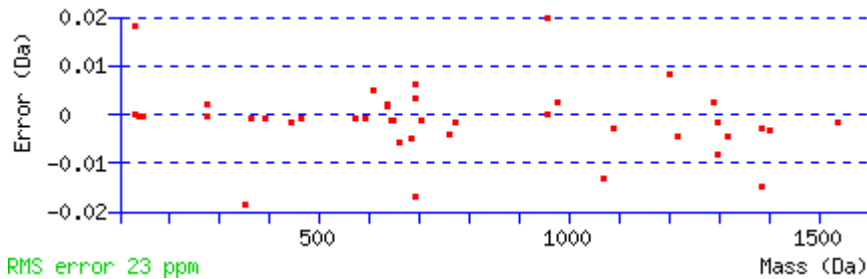
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1675.8642

Variable modifications:

K7 : Sumo 3 (K)

Ions Score: 37 Expect: 0.17

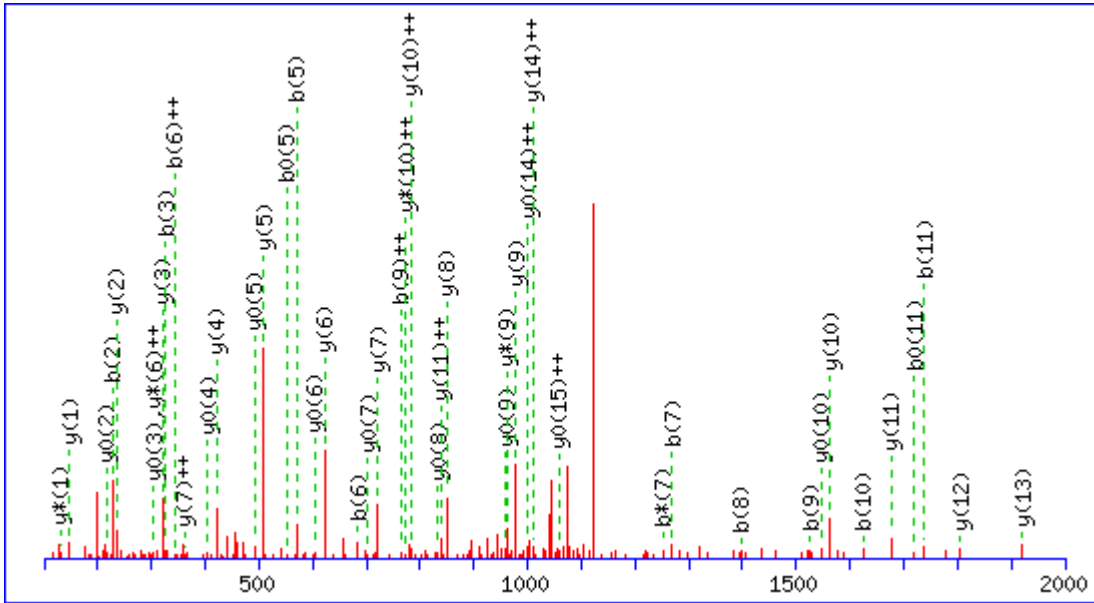
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 138.0662 | 69.5367 | | | | | H | | | | | | | 10 |
| 2 | 275.1251 | 138.0662 | | | | | H | 1539.8125 | 770.4099 | 1522.7860 | 761.8966 | 1521.8020 | 761.4046 | 9 |
| 3 | 362.1571 | 181.5822 | | | 344.1466 | 172.5769 | S | 1402.7536 | 701.8805 | 1385.7271 | 693.3672 | 1384.7431 | 692.8752 | 8 |
| 4 | 461.2255 | 231.1164 | | | 443.2150 | 222.1111 | V | 1315.7216 | 658.3644 | 1298.6951 | 649.8512 | 1297.7110 | 649.3592 | 7 |
| 5 | 590.2681 | 295.6377 | | | 572.2576 | 286.6324 | E | 1216.6532 | 608.8302 | 1199.6266 | 600.3170 | 1198.6426 | 599.8250 | 6 |
| 6 | 703.3522 | 352.1797 | | | 685.3416 | 343.1745 | I | 1087.6106 | 544.3089 | 1070.5840 | 535.7957 | 1069.6000 | 535.3037 | 5 |
| 7 | 1288.6393 | 644.8233 | 1271.6127 | 636.3100 | 1270.6287 | 635.8180 | K | 974.5265 | 487.7669 | 957.5000 | 479.2536 | 956.5160 | 478.7616 | 4 |
| 8 | 1401.7233 | 701.3653 | 1384.6968 | 692.8520 | 1383.7128 | 692.3600 | I | 389.2395 | 195.1234 | 372.2129 | 186.6101 | 371.2289 | 186.1181 | 3 |
| 9 | 1530.7659 | 765.8866 | 1513.7394 | 757.3733 | 1512.7554 | 756.8813 | E | 276.1554 | 138.5813 | 259.1288 | 130.0681 | 258.1448 | 129.5761 | 2 |
| 10 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 62

MS/MS Fragmentation of **IIVDELKQEVISTSSK**

Found in **P63244**, Guanine nucleotide-binding protein subunit beta-2-like 1 OS=Homo sapiens GN=GNB2L1 PE=1 SV=3



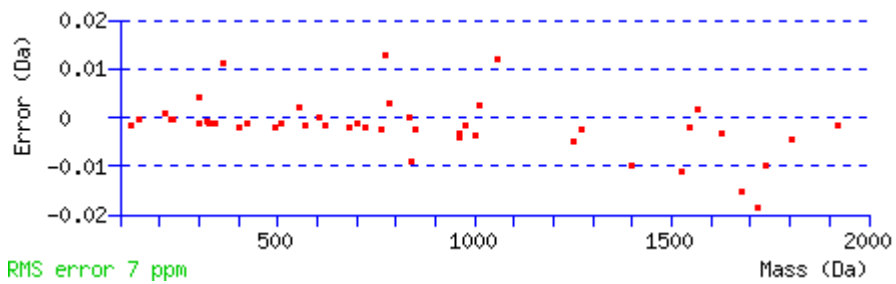
Monoisotopic mass of neutral peptide Mr(calc): 2245.1801

Variable modifications:

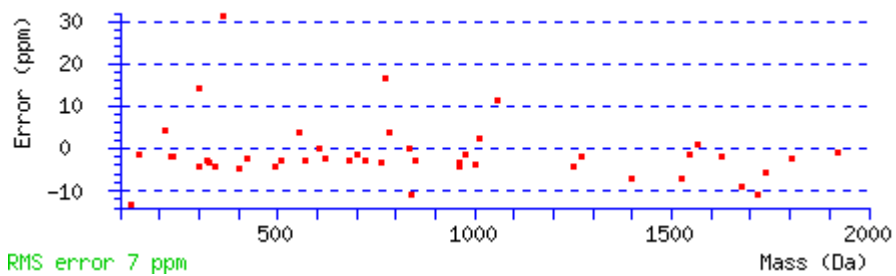
K7 : Sumo 3 (K)

Ions Score: 93 Expect: 3.6e-07

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 114.0913 | 57.5493 | | | | | I | | | | | | | 16 |
| 2 | 227.1754 | 114.0913 | | | | | I | 2133.1034 | 1067.0553 | 2116.0768 | 1058.5420 | 2115.0928 | 1058.0500 | 15 |
| 3 | 326.2438 | 163.6255 | | | | | V | 2020.0193 | 1010.5133 | 2002.9928 | 1002.0000 | 2002.0087 | 1001.5080 | 14 |
| 4 | 441.2708 | 221.1390 | | | 423.2602 | 212.1337 | D | 1920.9509 | 960.9791 | 1903.9243 | 952.4658 | 1902.9403 | 951.9738 | 13 |
| 5 | 570.3134 | 285.6603 | | | 552.3028 | 276.6550 | E | 1805.9239 | 903.4656 | 1788.8974 | 894.9523 | 1787.9134 | 894.4603 | 12 |
| 6 | 683.3974 | 342.2023 | | | 665.3869 | 333.1971 | L | 1676.8814 | 838.9443 | 1659.8548 | 830.4310 | 1658.8708 | 829.9390 | 11 |
| 7 | 1268.6845 | 634.8459 | 1251.6579 | 626.3326 | 1250.6739 | 625.8406 | K | 1563.7973 | 782.4023 | 1546.7707 | 773.8890 | 1545.7867 | 773.3970 | 10 |
| 8 | 1396.7431 | 698.8752 | 1379.7165 | 690.3619 | 1378.7325 | 689.8699 | Q | 978.5102 | 489.7587 | 961.4837 | 481.2455 | 960.4997 | 480.7535 | 9 |
| 9 | 1525.7857 | 763.3965 | 1508.7591 | 754.8832 | 1507.7751 | 754.3912 | E | 850.4516 | 425.7295 | 833.4251 | 417.2162 | 832.4411 | 416.7242 | 8 |
| 10 | 1624.8541 | 812.9307 | 1607.8275 | 804.4174 | 1606.8435 | 803.9254 | V | 721.4090 | 361.2082 | 704.3825 | 352.6949 | 703.3985 | 352.2029 | 7 |
| 11 | 1737.9381 | 869.4727 | 1720.9116 | 860.9594 | 1719.9276 | 860.4674 | I | 622.3406 | 311.6740 | 605.3141 | 303.1607 | 604.3301 | 302.6687 | 6 |
| 12 | 1824.9702 | 912.9887 | 1807.9436 | 904.4754 | 1806.9596 | 903.9834 | S | 509.2566 | 255.1319 | 492.2300 | 246.6186 | 491.2460 | 246.1266 | 5 |
| 13 | 1926.0178 | 963.5126 | 1908.9913 | 954.9993 | 1908.0073 | 954.5073 | T | 422.2245 | 211.6159 | 405.1980 | 203.1026 | 404.2140 | 202.6106 | 4 |
| 14 | 2013.0499 | 1007.0286 | 1996.0233 | 998.5153 | 1995.0393 | 998.0233 | S | 321.1769 | 161.0921 | 304.1503 | 152.5788 | 303.1663 | 152.0868 | 3 |
| 15 | 2100.0819 | 1050.5446 | 2083.0554 | 1042.0313 | 2082.0713 | 1041.5393 | S | 234.1448 | 117.5761 | 217.1183 | 109.0628 | 216.1343 | 108.5708 | 2 |
| 16 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



RMS error 7 ppm



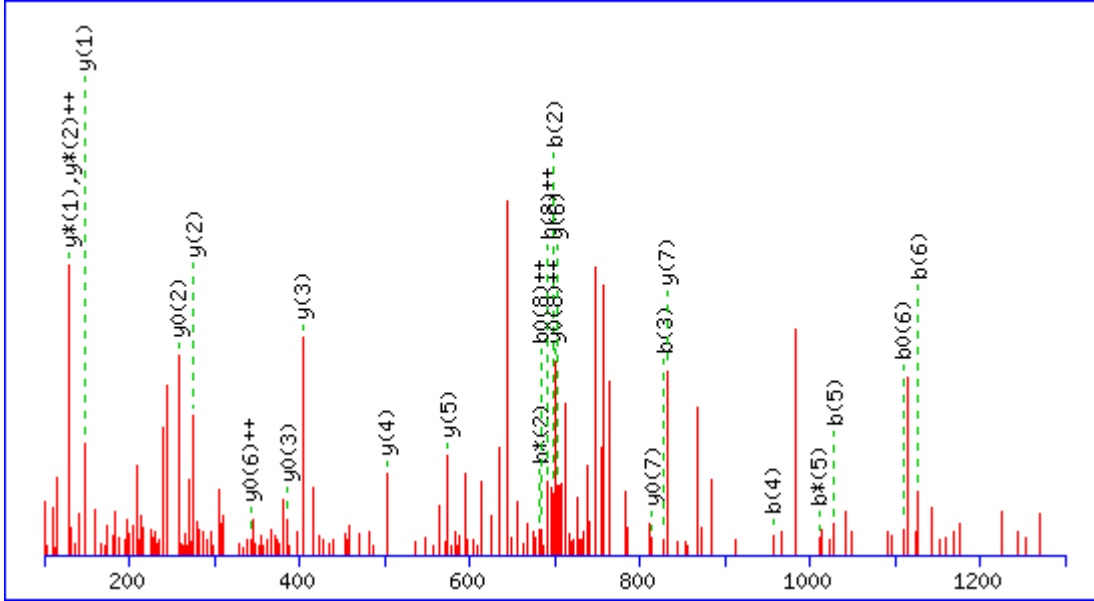
RMS error 7 ppm

IDENTIFICATION 63

MS/MS Fragmentation of

IKEEAVKEK

Found in **O76021**, Ribosomal L1 domain-containing protein 1 OS=Homo sapiens GN=RSL1D1 PE=1 SV=3



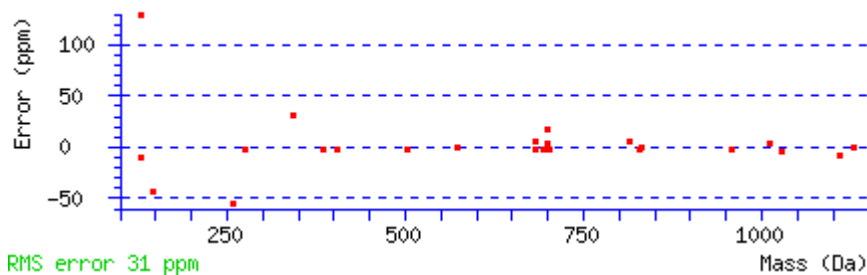
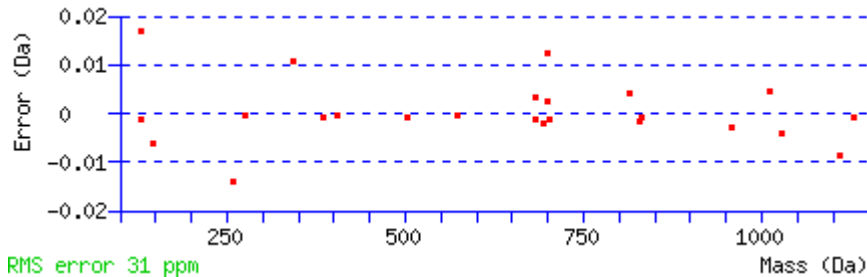
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1529.8049

Variable modifications:

K2 : Sumo 3 (K)

Ions Score: 19 Expect: 9.9

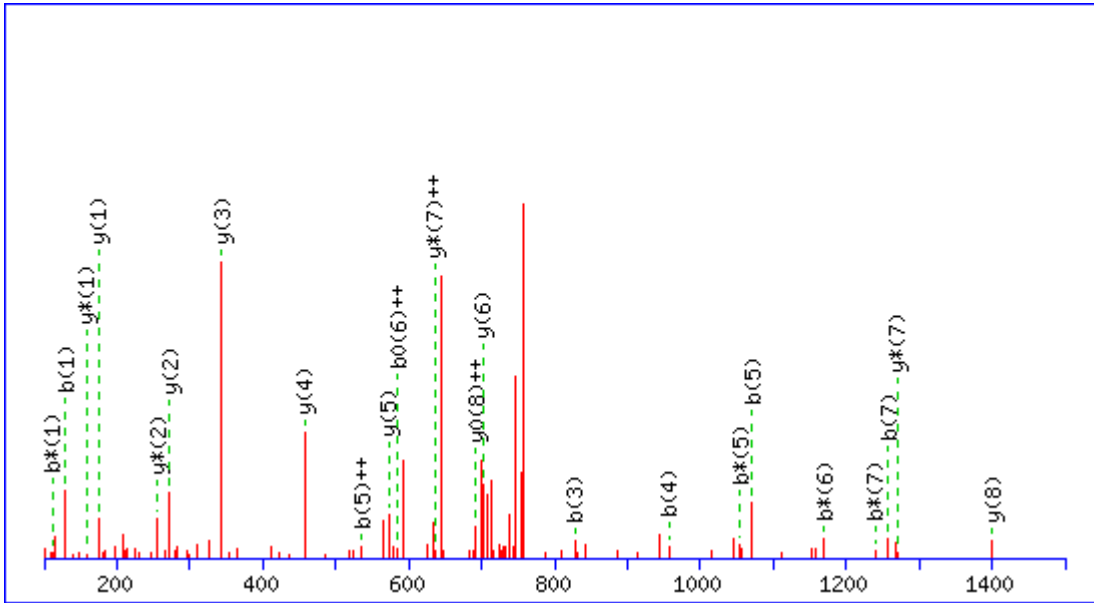
| # | b | b ⁺⁺ | b ⁺ | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y ⁺ | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|---|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|---|
| 1 | 114.0913 | 57.5493 | | | | | I | | | | | | | 9 |
| 2 | 699.3784 | 350.1928 | 682.3519 | 341.6796 | | | K | 1417.7281 | 709.3677 | 1400.7016 | 700.8544 | 1399.7176 | 700.3624 | 8 |
| 3 | 828.4210 | 414.7141 | 811.3945 | 406.2009 | 810.4104 | 405.7089 | E | 832.4411 | 416.7242 | 815.4145 | 408.2109 | 814.4305 | 407.7189 | 7 |
| 4 | 957.4636 | 479.2354 | 940.4371 | 470.7222 | 939.4530 | 470.2302 | E | 703.3985 | 352.2029 | 686.3719 | 343.6896 | 685.3879 | 343.1976 | 6 |
| 5 | 1028.5007 | 514.7540 | 1011.4742 | 506.2407 | 1010.4901 | 505.7487 | A | 574.3559 | 287.6816 | 557.3293 | 279.1683 | 556.3453 | 278.6763 | 5 |
| 6 | 1127.5691 | 564.2882 | 1110.5426 | 555.7749 | 1109.5586 | 555.2829 | V | 503.3188 | 252.1630 | 486.2922 | 243.6498 | 485.3082 | 243.1577 | 4 |
| 7 | 1255.6641 | 628.3357 | 1238.6375 | 619.8224 | 1237.6535 | 619.3304 | K | 404.2504 | 202.6288 | 387.2238 | 194.1155 | 386.2398 | 193.6235 | 3 |
| 8 | 1384.7067 | 692.8570 | 1367.6801 | 684.3437 | 1366.6961 | 683.8517 | E | 276.1554 | 138.5813 | 259.1288 | 130.0681 | 258.1448 | 129.5761 | 2 |
| 9 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 64

MS/MS Fragmentation of **KIKEDDAPR**

Found in **P25490**, Transcriptional repressor protein YY1 OS=Homo sapiens GN=YY1 PE=1 SV=2



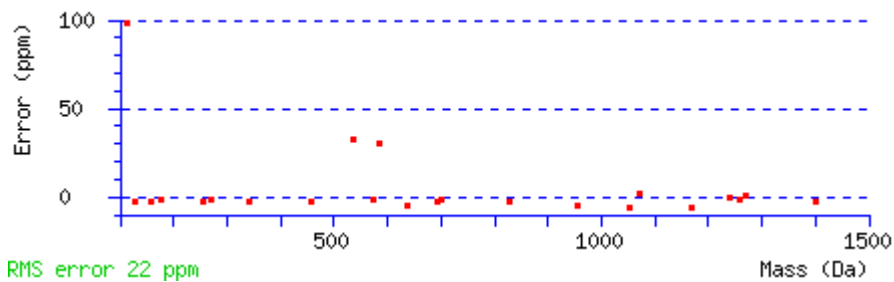
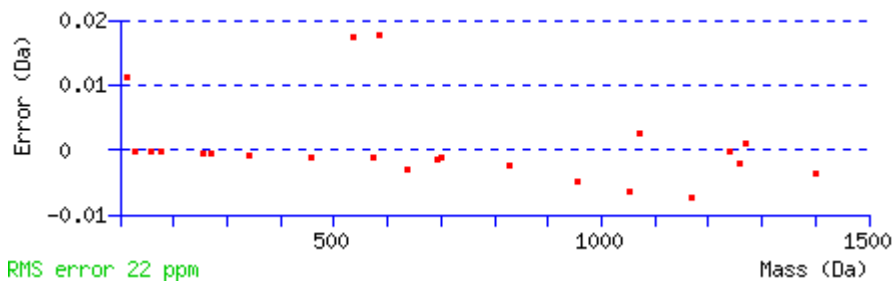
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1527.7641

Variable modifications:

K3 : Sumo 3 (K)

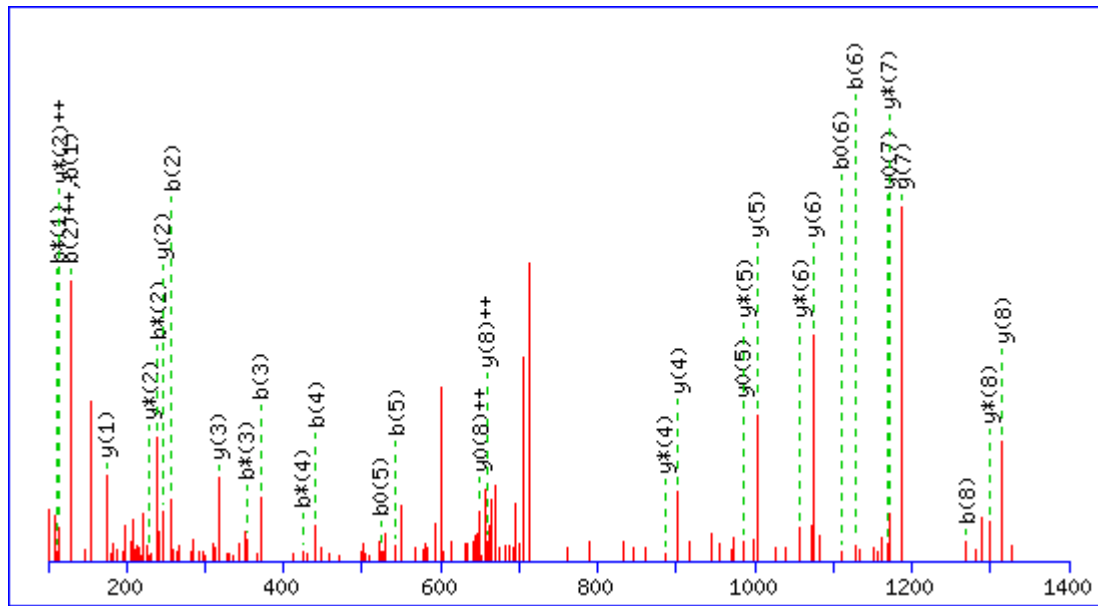
Ions Score: 36 Expect: 0.3

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|---|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|---|
| 1 | 129.1022 | 65.0548 | 112.0757 | 56.5415 | | | K | | | | | | | 9 |
| 2 | 242.1863 | 121.5968 | 225.1598 | 113.0835 | | | I | 1400.6764 | 700.8419 | 1383.6499 | 692.3286 | 1382.6659 | 691.8366 | 8 |
| 3 | 827.4734 | 414.2403 | 810.4468 | 405.7271 | | | K | 1287.5924 | 644.2998 | 1270.5658 | 635.7866 | 1269.5818 | 635.2945 | 7 |
| 4 | 956.5160 | 478.7616 | 939.4894 | 470.2483 | 938.5054 | 469.7563 | E | 702.3053 | 351.6563 | 685.2788 | 343.1430 | 684.2947 | 342.6510 | 6 |
| 5 | 1071.5429 | 536.2751 | 1054.5164 | 527.7618 | 1053.5323 | 527.2698 | D | 573.2627 | 287.1350 | 556.2362 | 278.6217 | 555.2522 | 278.1297 | 5 |
| 6 | 1186.5699 | 593.7886 | 1169.5433 | 585.2753 | 1168.5593 | 584.7833 | D | 458.2358 | 229.6215 | 441.2092 | 221.1082 | 440.2252 | 220.6162 | 4 |
| 7 | 1257.6070 | 629.3071 | 1240.5804 | 620.7938 | 1239.5964 | 620.3018 | A | 343.2088 | 172.1081 | 326.1823 | 163.5948 | | | 3 |
| 8 | 1354.6597 | 677.8335 | 1337.6332 | 669.3202 | 1336.6492 | 668.8282 | P | 272.1717 | 136.5895 | 255.1452 | 128.0762 | | | 2 |
| 9 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



MS/MS Fragmentation of **KQLATKAAR**

Found in **P68431**, Histone H3.1 OS=Homo sapiens GN=HIST1H3A PE=1 SV=2



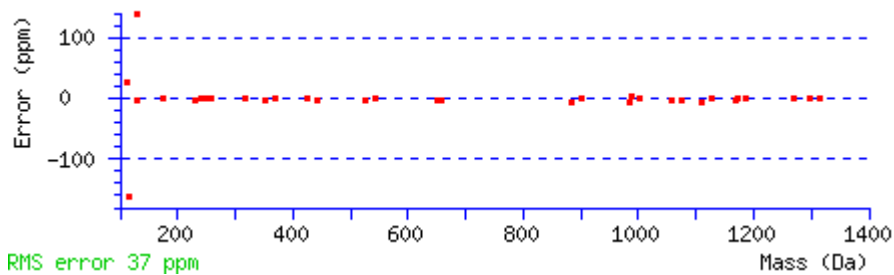
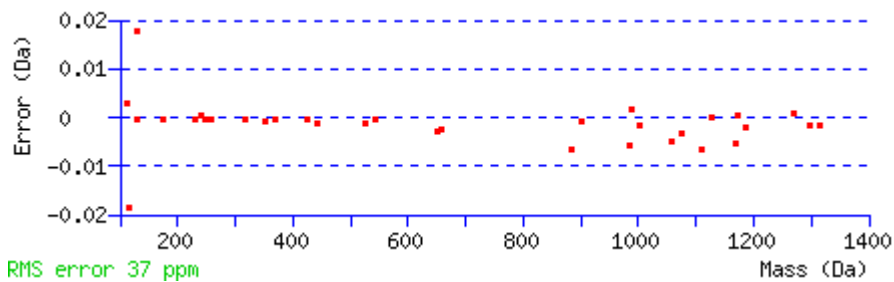
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1442.7953

Variable modifications:

K6 : Sumo 3 (K)

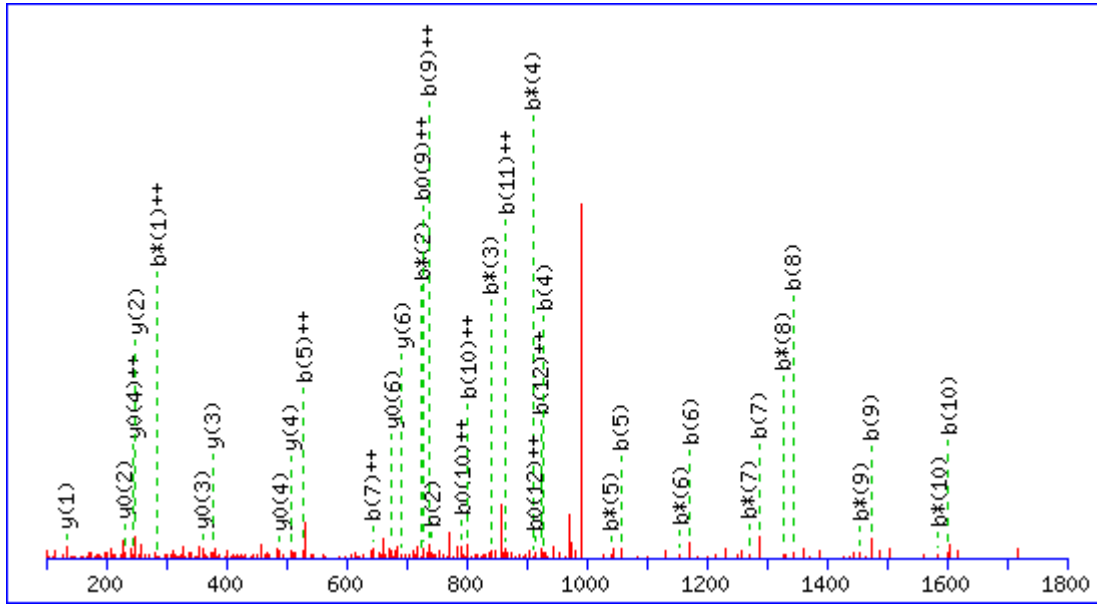
Ions Score: 41 Expect: 0.022

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|---|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|---|
| 1 | 129.1022 | 65.0548 | 112.0757 | 56.5415 | | | K | | | | | | | 9 |
| 2 | 257.1608 | 129.0840 | 240.1343 | 120.5708 | | | Q | 1315.7077 | 658.3575 | 1298.6811 | 649.8442 | 1297.6971 | 649.3522 | 8 |
| 3 | 370.2449 | 185.6261 | 353.2183 | 177.1128 | | | L | 1187.6491 | 594.3282 | 1170.6226 | 585.8149 | 1169.6385 | 585.3229 | 7 |
| 4 | 441.2820 | 221.1446 | 424.2554 | 212.6314 | | | A | 1074.5650 | 537.7862 | 1057.5385 | 529.2729 | 1056.5545 | 528.7809 | 6 |
| 5 | 542.3297 | 271.6685 | 525.3031 | 263.1552 | 524.3191 | 262.6632 | T | 1003.5279 | 502.2676 | 986.5014 | 493.7543 | 985.5174 | 493.2623 | 5 |
| 6 | 1127.6167 | 564.3120 | 1110.5902 | 555.7987 | 1109.6062 | 555.3067 | K | 902.4803 | 451.7438 | 885.4537 | 443.2305 | | | 4 |
| 7 | 1198.6539 | 599.8306 | 1181.6273 | 591.3173 | 1180.6433 | 590.8253 | A | 317.1932 | 159.1002 | 300.1666 | 150.5870 | | | 3 |
| 8 | 1269.6910 | 635.3491 | 1252.6644 | 626.8359 | 1251.6804 | 626.3438 | A | 246.1561 | 123.5817 | 229.1295 | 115.0684 | | | 2 |
| 9 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



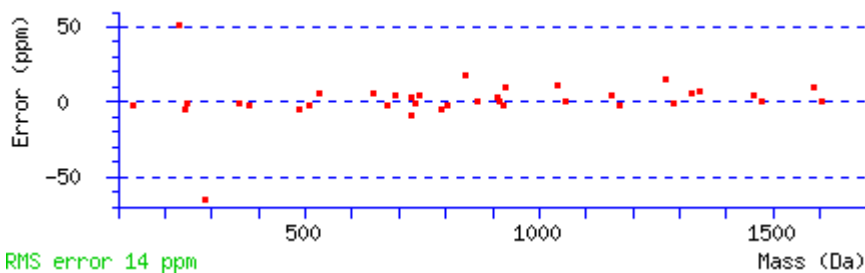
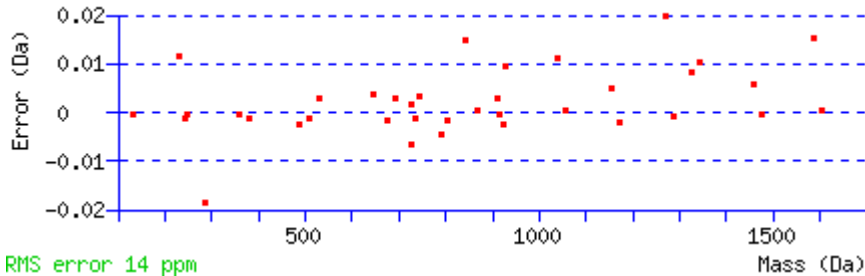
MS/MS Fragmentation of KRDAEDDGEEDD

Found in **Q9BTT0**, Acidic leucine-rich nuclear phosphoprotein 32 family member E OS=Homo sapiens GN=ANP32E PE=1 SV=1



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1978.7624 Variable modifications: K1 : Sumo 3 (K) Ions Score: 12 Expect: 87

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 586.2944 | 293.6508 | 569.2678 | 285.1375 | | | K | | | | | | | 13 |
| 2 | 742.3955 | 371.7014 | 725.3689 | 363.1881 | | | R | 1394.4826 | 697.7449 | 1377.4561 | 689.2317 | 1376.4721 | 688.7397 | 12 |
| 3 | 857.4224 | 429.2148 | 840.3959 | 420.7016 | 839.4118 | 420.2096 | D | 1238.3815 | 619.6944 | | | 1220.3709 | 610.6891 | 11 |
| 4 | 928.4595 | 464.7334 | 911.4330 | 456.2201 | 910.4490 | 455.7281 | A | 1123.3546 | 562.1809 | | | 1105.3440 | 553.1756 | 10 |
| 5 | 1057.5021 | 529.2547 | 1040.4756 | 520.7414 | 1039.4915 | 520.2494 | E | 1052.3174 | 526.6624 | | | 1034.3069 | 517.6571 | 9 |
| 6 | 1172.5291 | 586.7682 | 1155.5025 | 578.2549 | 1154.5185 | 577.7629 | D | 923.2749 | 462.1411 | | | 905.2643 | 453.1358 | 8 |
| 7 | 1287.5560 | 644.2816 | 1270.5294 | 635.7684 | 1269.5454 | 635.2764 | D | 808.2479 | 404.6276 | | | 790.2373 | 395.6223 | 7 |
| 8 | 1344.5775 | 672.7924 | 1327.5509 | 664.2791 | 1326.5669 | 663.7871 | G | 693.2210 | 347.1141 | | | 675.2104 | 338.1088 | 6 |
| 9 | 1473.6201 | 737.3137 | 1456.5935 | 728.8004 | 1455.6095 | 728.3084 | E | 636.1995 | 318.6034 | | | 618.1889 | 309.5981 | 5 |
| 10 | 1602.6626 | 801.8350 | 1585.6361 | 793.3217 | 1584.6521 | 792.8297 | E | 507.1569 | 254.0821 | | | 489.1463 | 245.0768 | 4 |
| 11 | 1731.7052 | 866.3563 | 1714.6787 | 857.8430 | 1713.6947 | 857.3510 | E | 378.1143 | 189.5608 | | | 360.1038 | 180.5555 | 3 |
| 12 | 1846.7322 | 923.8697 | 1829.7056 | 915.3565 | 1828.7216 | 914.8644 | D | 249.0717 | 125.0395 | | | 231.0612 | 116.0342 | 2 |
| 13 | | | | | | | D | 134.0448 | 67.5260 | | | 116.0342 | 58.5207 | 1 |



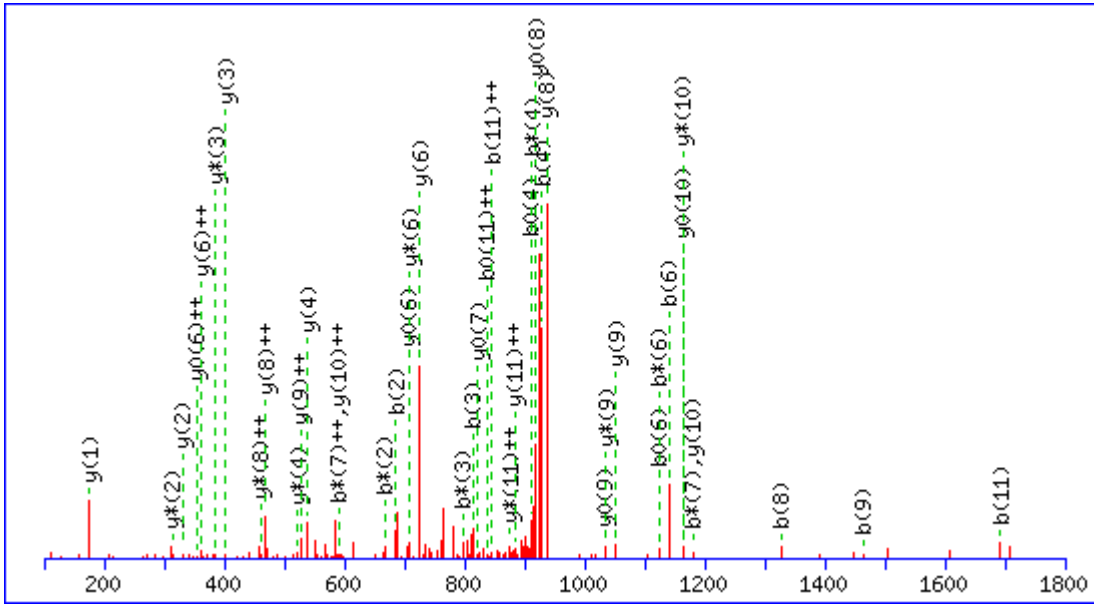
IDENTIFICATION 51

MS/MS Fragmentation of **VKEDPDGEHARR**

Found in

P52272

, Heterogeneous nuclear ribonucleoprotein M OS=Homo sapiens GN=HNRNPM PE=1 SV=3



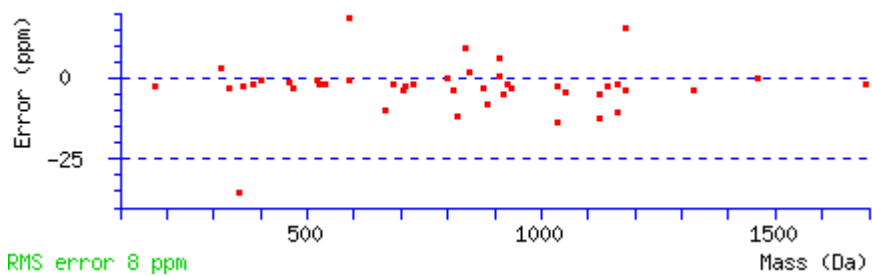
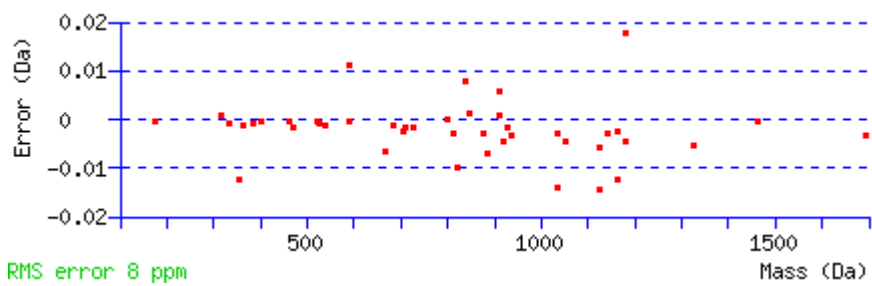
Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1864.8776

Variable modifications:

K2 : Sumo 3 (K)

Ions Score: 36 Expect: 0.5

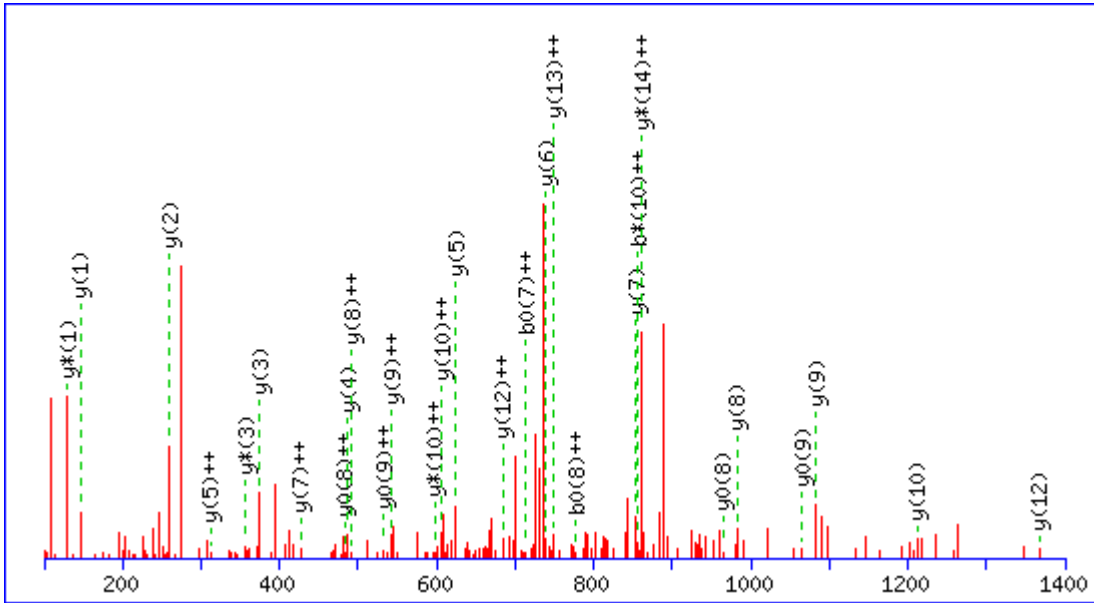
| # | b | b ⁺⁺ | b ⁺ | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y ⁺ | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 100.0757 | 50.5415 | | | | | V | | | | | | | 12 |
| 2 | 685.3628 | 343.1850 | 668.3362 | 334.6717 | | | K | 1766.8165 | 883.9119 | 1749.7899 | 875.3986 | 1748.8059 | 874.9066 | 11 |
| 3 | 814.4054 | 407.7063 | 797.3788 | 399.1930 | 796.3948 | 398.7010 | E | 1181.5294 | 591.2683 | 1164.5028 | 582.7551 | 1163.5188 | 582.2631 | 10 |
| 4 | 929.4323 | 465.2198 | 912.4058 | 456.7065 | 911.4217 | 456.2145 | D | 1052.4868 | 526.7470 | 1035.4602 | 518.2338 | 1034.4762 | 517.7418 | 9 |
| 5 | 1026.4851 | 513.7462 | 1009.4585 | 505.2329 | 1008.4745 | 504.7409 | P | 937.4599 | 469.2336 | 920.4333 | 460.7203 | 919.4493 | 460.2283 | 8 |
| 6 | 1141.5120 | 571.2596 | 1124.4855 | 562.7464 | 1123.5014 | 562.2544 | D | 840.4071 | 420.7072 | 823.3805 | 412.1939 | 822.3965 | 411.7019 | 7 |
| 7 | 1198.5335 | 599.7704 | 1181.5069 | 591.2571 | 1180.5229 | 590.7651 | G | 725.3801 | 363.1937 | 708.3536 | 354.6804 | 707.3696 | 354.1884 | 6 |
| 8 | 1327.5761 | 664.2917 | 1310.5495 | 655.7784 | 1309.5655 | 655.2864 | E | 668.3587 | 334.6830 | 651.3321 | 326.1697 | 650.3481 | 325.6777 | 5 |
| 9 | 1464.6350 | 732.8211 | 1447.6084 | 724.3079 | 1446.6244 | 723.8158 | H | 539.3161 | 270.1617 | 522.2895 | 261.6484 | | | 4 |
| 10 | 1535.6721 | 768.3397 | 1518.6455 | 759.8264 | 1517.6615 | 759.3344 | A | 402.2572 | 201.6322 | 385.2306 | 193.1190 | | | 3 |
| 11 | 1691.7732 | 846.3902 | 1674.7467 | 837.8770 | 1673.7626 | 837.3850 | R | 331.2201 | 166.1137 | 314.1935 | 157.6004 | | | 2 |
| 12 | | | | | | | R | 175.1190 | 88.0631 | 158.0924 | 79.5498 | | | 1 |



IDENTIFICATION 67

MS/MS Fragmentation of **MSEKPKEGVKTENDHNLK**

Found in **P55854**, Small ubiquitin-related modifier 3 OS=Homo sapiens GN=SUMO3 PE=1 SV=2



Monoisotopic mass of neutral peptide Mr(calc): 2938.4090

Variable modifications:

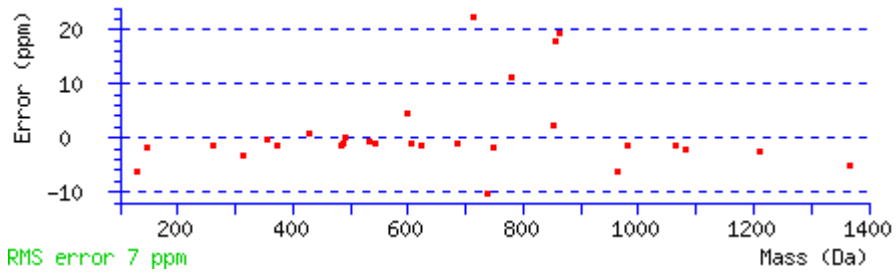
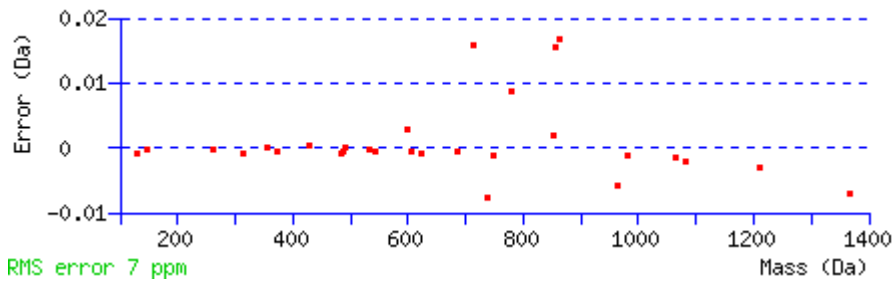
N-term : Acetyl (N-term)

K5 : Sumo 3 (K)

K7 : GlyGly (K)

Ions Score: 12 Expect: 2.7e+02

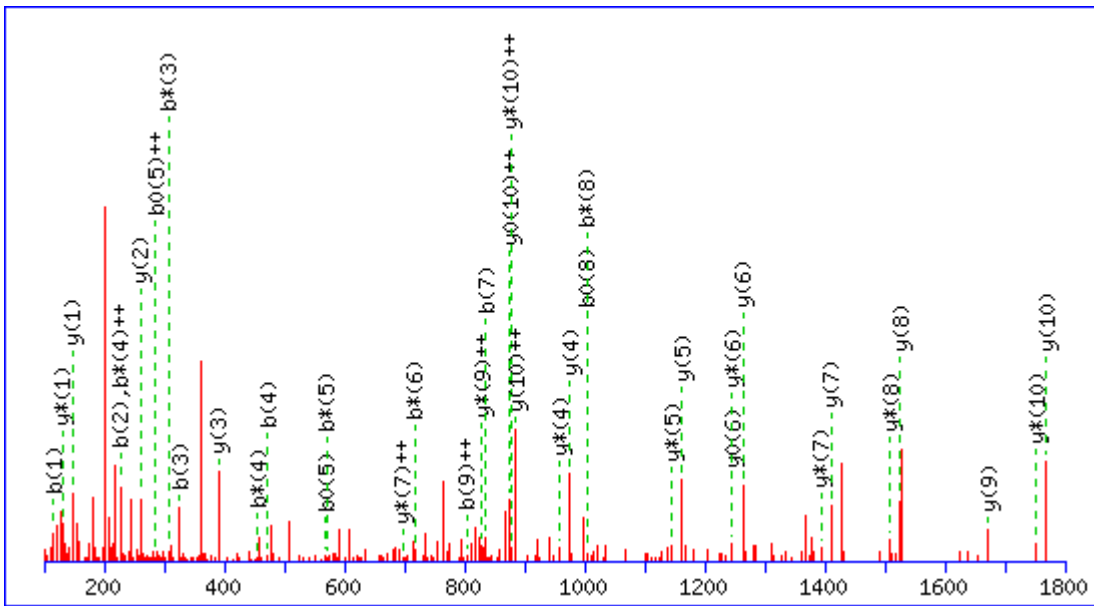
| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 174.0583 | 87.5328 | | | | | M | | | | | | | 20 |
| 2 | 261.0904 | 131.0488 | | | 243.0798 | 122.0435 | S | 2766.3653 | 1383.6863 | 2749.3387 | 1375.1730 | 2748.3547 | 1374.6810 | 19 |
| 3 | 390.1329 | 195.5701 | | | 372.1224 | 186.5648 | E | 2679.3333 | 1340.1703 | 2662.3067 | 1331.6570 | 2661.3227 | 1331.1650 | 18 |
| 4 | 519.1755 | 260.0914 | | | 501.1650 | 251.0861 | E | 2550.2907 | 1275.6490 | 2533.2641 | 1267.1357 | 2532.2801 | 1266.6437 | 17 |
| 5 | 1104.4626 | 552.7349 | 1087.4361 | 544.2217 | 1086.4520 | 543.7297 | K | 2421.2481 | 1211.1277 | 2404.2215 | 1202.6144 | 2403.2375 | 1202.1224 | 16 |
| 6 | 1201.5154 | 601.2613 | 1184.4888 | 592.7481 | 1183.5048 | 592.2560 | P | 1835.9610 | 918.4841 | 1818.9345 | 909.9709 | 1817.9504 | 909.4789 | 15 |
| 7 | 1443.6533 | 722.3303 | 1426.6267 | 713.8170 | 1425.6427 | 713.3250 | K | 1738.9082 | 869.9578 | 1721.8817 | 861.4445 | 1720.8977 | 860.9525 | 14 |
| 8 | 1572.6959 | 786.8516 | 1555.6693 | 778.3383 | 1554.6853 | 777.8463 | E | 1496.7703 | 748.8888 | 1479.7438 | 740.3755 | 1478.7598 | 739.8835 | 13 |
| 9 | 1629.7173 | 815.3623 | 1612.6908 | 806.8490 | 1611.7068 | 806.3570 | G | 1367.7278 | 684.3675 | 1350.7012 | 675.8542 | 1349.7172 | 675.3622 | 12 |
| 10 | 1728.7857 | 864.8965 | 1711.7592 | 856.3832 | 1710.7752 | 855.8912 | V | 1310.7063 | 655.8568 | 1293.6797 | 647.3435 | 1292.6957 | 646.8515 | 11 |
| 11 | 1856.8807 | 928.9440 | 1839.8542 | 920.4307 | 1838.8701 | 919.9387 | K | 1211.6379 | 606.3226 | 1194.6113 | 597.8093 | 1193.6273 | 597.3173 | 10 |
| 12 | 1957.9284 | 979.4678 | 1940.9018 | 970.9546 | 1939.9178 | 970.4625 | T | 1083.5429 | 542.2751 | 1066.5164 | 533.7618 | 1065.5323 | 533.2698 | 9 |
| 13 | 2086.9710 | 1043.9891 | 2069.9444 | 1035.4759 | 2068.9604 | 1034.9838 | E | 982.4952 | 491.7513 | 965.4687 | 483.2380 | 964.4847 | 482.7460 | 8 |
| 14 | 2201.0139 | 1101.0106 | 2183.9874 | 1092.4973 | 2183.0033 | 1092.0053 | N | 853.4526 | 427.2300 | 836.4261 | 418.7167 | 835.4421 | 418.2247 | 7 |
| 15 | 2316.0408 | 1158.5241 | 2299.0143 | 1150.0108 | 2298.0303 | 1149.5188 | D | 739.4097 | 370.2085 | 722.3832 | 361.6952 | 721.3991 | 361.2032 | 6 |
| 16 | 2453.0998 | 1227.0535 | 2436.0732 | 1218.5402 | 2435.0892 | 1218.0482 | H | 624.3828 | 312.6950 | 607.3562 | 304.1817 | | | 5 |
| 17 | 2566.1838 | 1283.5955 | 2549.1573 | 1275.0823 | 2548.1733 | 1274.5903 | I | 487.3239 | 244.1656 | 470.2973 | 235.6523 | | | 4 |
| 18 | 2680.2267 | 1340.6170 | 2663.2002 | 1332.1037 | 2662.2162 | 1331.6117 | N | 374.2398 | 187.6235 | 357.2132 | 179.1103 | | | 3 |
| 19 | 2793.3108 | 1397.1590 | 2776.2843 | 1388.6458 | 2775.3002 | 1388.1538 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 20 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



IDENTIFICATION 68

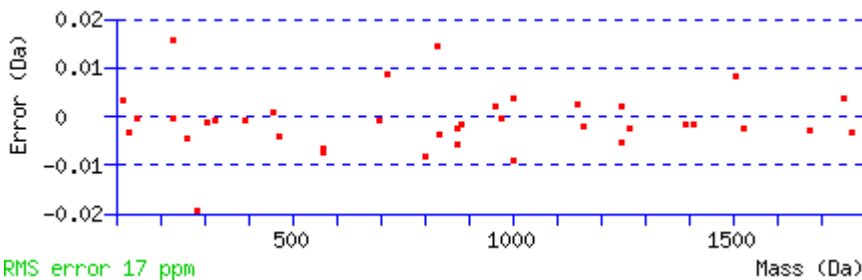
MS/MS Fragmentation of **NLPFDFTWKMLK**

Found in **P52272**, Heterogeneous nuclear ribonucleoprotein M OS=Homo sapiens GN=HNRNPM PE=1 SV=3

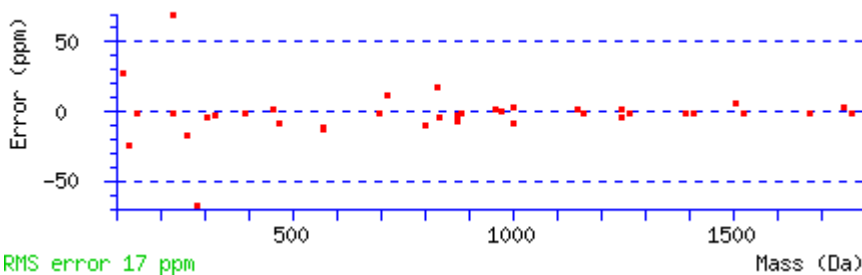


Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1995.9877 Variable modifications: K9 : Sumo 3 (K) Ions Score: 42 Expect: 0.096

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 115.0502 | 58.0287 | 98.0237 | 49.5155 | | | N | | | | | | | 12 |
| 2 | 228.1343 | 114.5708 | 211.1077 | 106.0575 | | | L | 1882.9520 | 941.9796 | 1865.9255 | 933.4664 | 1864.9415 | 932.9744 | 11 |
| 3 | 325.1870 | 163.0972 | 308.1605 | 154.5839 | | | P | 1769.8680 | 885.4376 | 1752.8414 | 876.9243 | 1751.8574 | 876.4323 | 10 |
| 4 | 472.2554 | 236.6314 | 455.2289 | 228.1181 | | | F | 1672.8152 | 836.9112 | 1655.7886 | 828.3980 | 1654.8046 | 827.9060 | 9 |
| 5 | 587.2824 | 294.1448 | 570.2558 | 285.6316 | 569.2718 | 285.1395 | D | 1525.7468 | 763.3770 | 1508.7202 | 754.8638 | 1507.7362 | 754.3717 | 8 |
| 6 | 734.3508 | 367.6790 | 717.3243 | 359.1658 | 716.3402 | 358.6738 | F | 1410.7198 | 705.8636 | 1393.6933 | 697.3503 | 1392.7093 | 696.8583 | 7 |
| 7 | 835.3985 | 418.2029 | 818.3719 | 409.6896 | 817.3879 | 409.1976 | T | 1263.6514 | 632.3293 | 1246.6249 | 623.8161 | 1245.6409 | 623.3241 | 6 |
| 8 | 1021.4778 | 511.2425 | 1004.4512 | 502.7293 | 1003.4672 | 502.2373 | W | 1162.6037 | 581.8055 | 1145.5772 | 573.2922 | | | 5 |
| 9 | 1606.7649 | 803.8861 | 1589.7383 | 795.3728 | 1588.7543 | 794.8808 | K | 976.5244 | 488.7659 | 959.4979 | 480.2526 | | | 4 |
| 10 | 1737.8054 | 869.4063 | 1720.7788 | 860.8930 | 1719.7948 | 860.4010 | M | 391.2374 | 196.1223 | 374.2108 | 187.6090 | | | 3 |
| 11 | 1850.8894 | 925.9483 | 1833.8629 | 917.4351 | 1832.8789 | 916.9431 | L | 260.1969 | 130.6021 | 243.1703 | 122.0888 | | | 2 |
| 12 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



RMS error 17 ppm

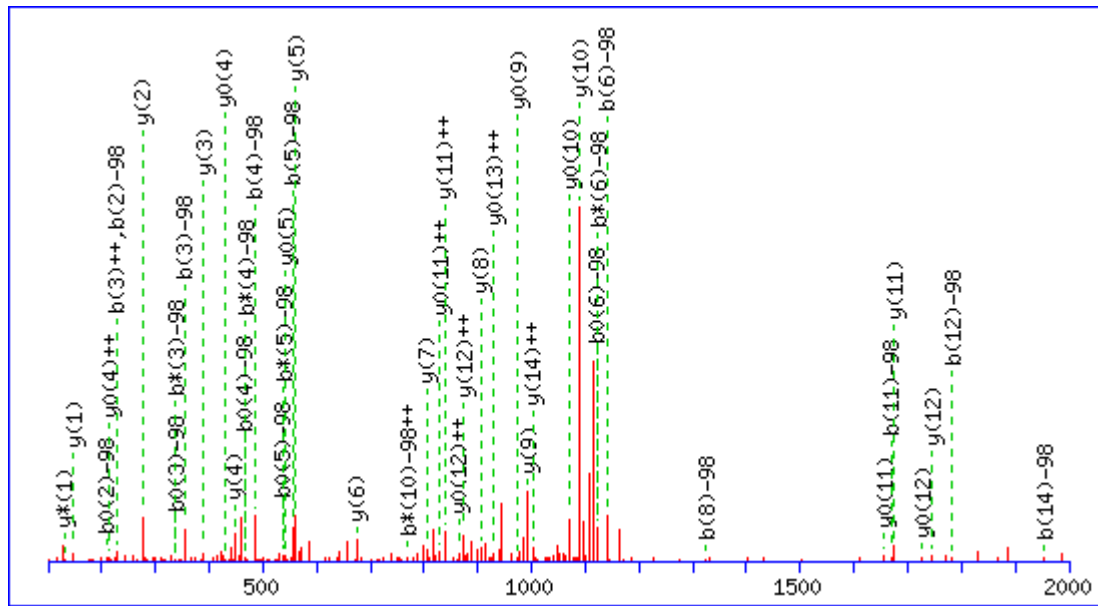


RMS error 17 ppm

IDENTIFICATION 69

MS/MS Fragmentation of **SDQEAKPSTEDLGDKK**

Found in **P63165**, Small ubiquitin-related modifier 1 OS=Homo sapiens GN=SUMO1 PE=1 SV=1



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2325.9962

Variable modifications:

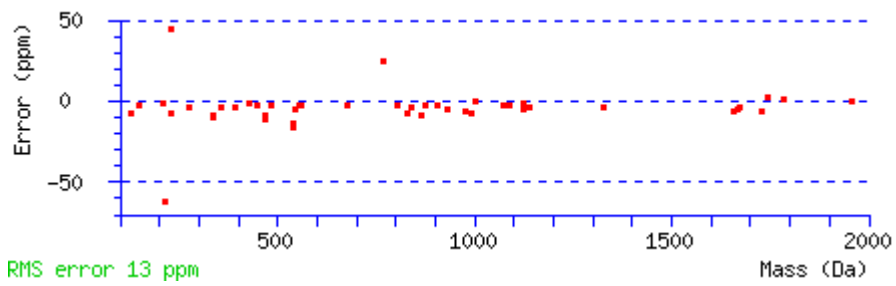
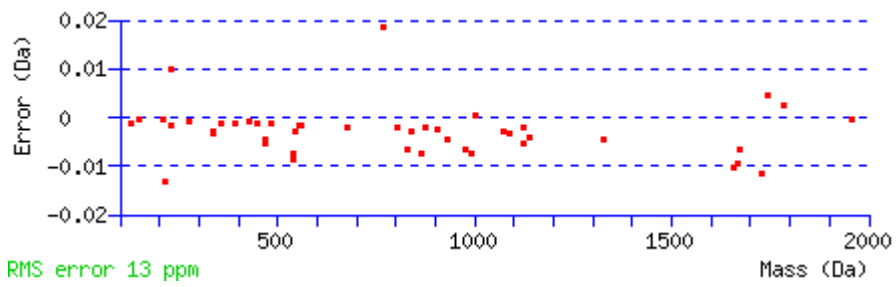
N-term : Acetyl (N-term)

S1 : Phospho (ST), with neutral losses 97.9769 (shown in table), 0.0000

K6 : Sumo 3 (K)

Ions Score: 45 Expect: 0.11

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 112.0393 | 56.5233 | | | 94.0287 | 47.5180 | S | | | | | | | 16 |
| 2 | 227.0662 | 114.0368 | | | 209.0557 | 105.0315 | D | 2117.9945 | 1059.5009 | 2100.9680 | 1050.9876 | 2099.9840 | 1050.4956 | 15 |
| 3 | 355.1248 | 178.0661 | 338.0983 | 169.5528 | 337.1143 | 169.0608 | Q | 2002.9676 | 1001.9874 | 1985.9411 | 993.4742 | 1984.9570 | 992.9822 | 14 |
| 4 | 484.1674 | 242.5873 | 467.1409 | 234.0741 | 466.1569 | 233.5821 | E | 1874.9090 | 937.9582 | 1857.8825 | 929.4449 | 1856.8985 | 928.9529 | 13 |
| 5 | 555.2045 | 278.1059 | 538.1780 | 269.5926 | 537.1940 | 269.1006 | A | 1745.8664 | 873.4369 | 1728.8399 | 864.9236 | 1727.8559 | 864.4316 | 12 |
| 6 | 1140.4916 | 570.7494 | 1123.4651 | 562.2362 | 1122.4810 | 561.7442 | K | 1674.8293 | 837.9183 | 1657.8028 | 829.4050 | 1656.8188 | 828.9130 | 11 |
| 7 | 1237.5444 | 619.2758 | 1220.5178 | 610.7625 | 1219.5338 | 610.2705 | P | 1089.5422 | 545.2748 | 1072.5157 | 536.7615 | 1071.5317 | 536.2695 | 10 |
| 8 | 1324.5764 | 662.7918 | 1307.5498 | 654.2786 | 1306.5658 | 653.7866 | S | 992.4895 | 496.7484 | 975.4629 | 488.2351 | 974.4789 | 487.7431 | 9 |
| 9 | 1425.6241 | 713.3157 | 1408.5975 | 704.8024 | 1407.6135 | 704.3104 | T | 905.4575 | 453.2324 | 888.4309 | 444.7191 | 887.4469 | 444.2271 | 8 |
| 10 | 1554.6667 | 777.8370 | 1537.6401 | 769.3237 | 1536.6561 | 768.8317 | E | 804.4098 | 402.7085 | 787.3832 | 394.1953 | 786.3992 | 393.7032 | 7 |
| 11 | 1669.6936 | 835.3504 | 1652.6671 | 826.8372 | 1651.6830 | 826.3452 | D | 675.3672 | 338.1872 | 658.3406 | 329.6740 | 657.3566 | 329.1819 | 6 |
| 12 | 1782.7777 | 891.8925 | 1765.7511 | 883.3792 | 1764.7671 | 882.8872 | L | 560.3402 | 280.6738 | 543.3137 | 272.1605 | 542.3297 | 271.6685 | 5 |
| 13 | 1839.7991 | 920.4032 | 1822.7726 | 911.8899 | 1821.7886 | 911.3979 | G | 447.2562 | 224.1317 | 430.2296 | 215.6185 | 429.2456 | 215.1264 | 4 |
| 14 | 1954.8261 | 977.9167 | 1937.7995 | 969.4034 | 1936.8155 | 968.9114 | D | 390.2347 | 195.6210 | 373.2082 | 187.1077 | 372.2241 | 186.6157 | 3 |
| 15 | 2082.9210 | 1041.9642 | 2065.8945 | 1033.4509 | 2064.9105 | 1032.9589 | K | 275.2078 | 138.1075 | 258.1812 | 129.5942 | | | 2 |
| 16 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |



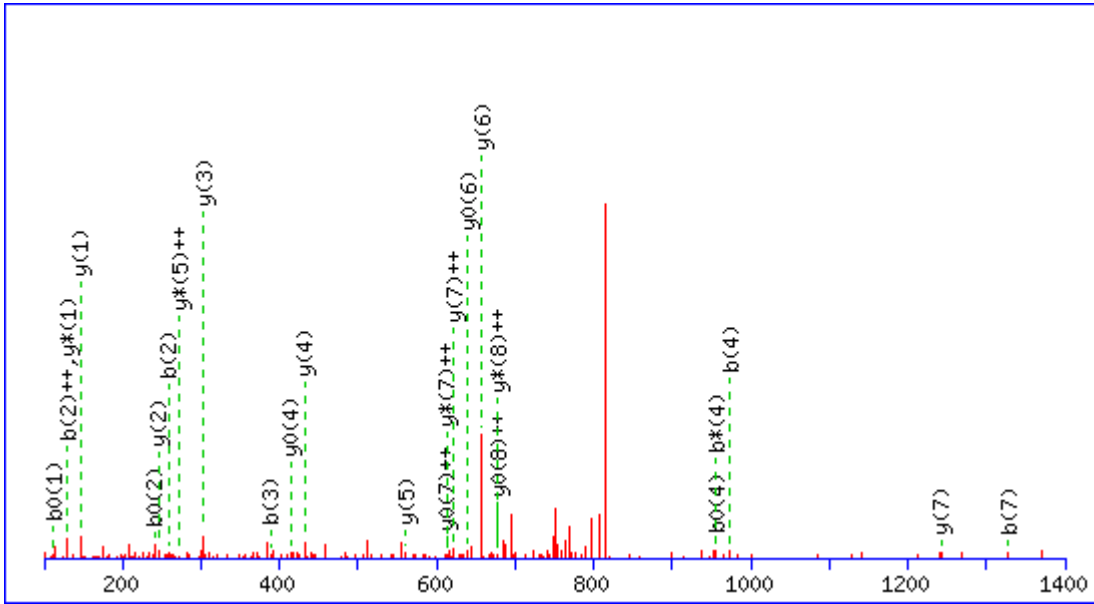
IDENTIFICATION 70

MS/MS Fragmentation of
SEEKPKEGVK

Found in

P55854

, Small ubiquitin-related modifier 3 OS=Homo sapiens GN=SUMO3 PE=1 SV=2



Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 1628.8005

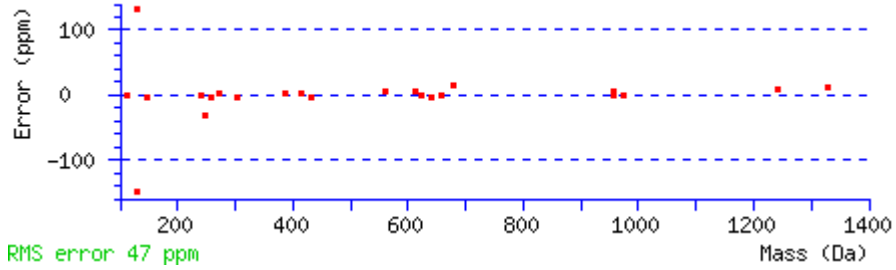
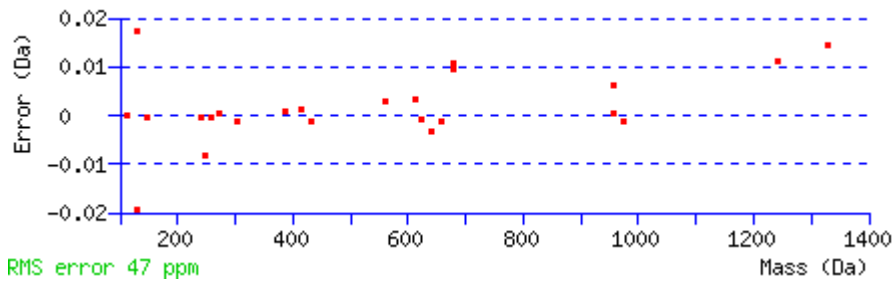
Variable modifications:

N-term : Acetyl (N-term)

K4 : Sumo 3 (K)

Ions Score: 28 Expect: 2.2

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 130.0499 | 65.5286 | | | 112.0393 | 56.5233 | S | | | | | | | 10 |
| 2 | 259.0925 | 130.0499 | | | 241.0819 | 121.0446 | E | 1500.7653 | 750.8863 | 1483.7387 | 742.3730 | 1482.7547 | 741.8810 | 9 |
| 3 | 388.1351 | 194.5712 | | | 370.1245 | 185.5659 | E | 1371.7227 | 686.3650 | 1354.6961 | 677.8517 | 1353.7121 | 677.3597 | 8 |
| 4 | 973.4221 | 487.2147 | 956.3956 | 478.7014 | 955.4116 | 478.2094 | K | 1242.6801 | 621.8437 | 1225.6535 | 613.3304 | 1224.6695 | 612.8384 | 7 |
| 5 | 1070.4749 | 535.7411 | 1053.4483 | 527.2278 | 1052.4643 | 526.7358 | P | 657.3930 | 329.2001 | 640.3665 | 320.6869 | 639.3824 | 320.1949 | 6 |
| 6 | 1198.5699 | 599.7886 | 1181.5433 | 591.2753 | 1180.5593 | 590.7833 | K | 560.3402 | 280.6738 | 543.3137 | 272.1605 | 542.3297 | 271.6685 | 5 |
| 7 | 1327.6124 | 664.3099 | 1310.5859 | 655.7966 | 1309.6019 | 655.3046 | E | 432.2453 | 216.6263 | 415.2187 | 208.1130 | 414.2347 | 207.6210 | 4 |
| 8 | 1384.6339 | 692.8206 | 1367.6074 | 684.3073 | 1366.6233 | 683.8153 | G | 303.2027 | 152.1050 | 286.1761 | 143.5917 | | | 3 |
| 9 | 1483.7023 | 742.3548 | 1466.6758 | 733.8415 | 1465.6918 | 733.3495 | V | 246.1812 | 123.5942 | 229.1547 | 115.0810 | | | 2 |
| 10 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |

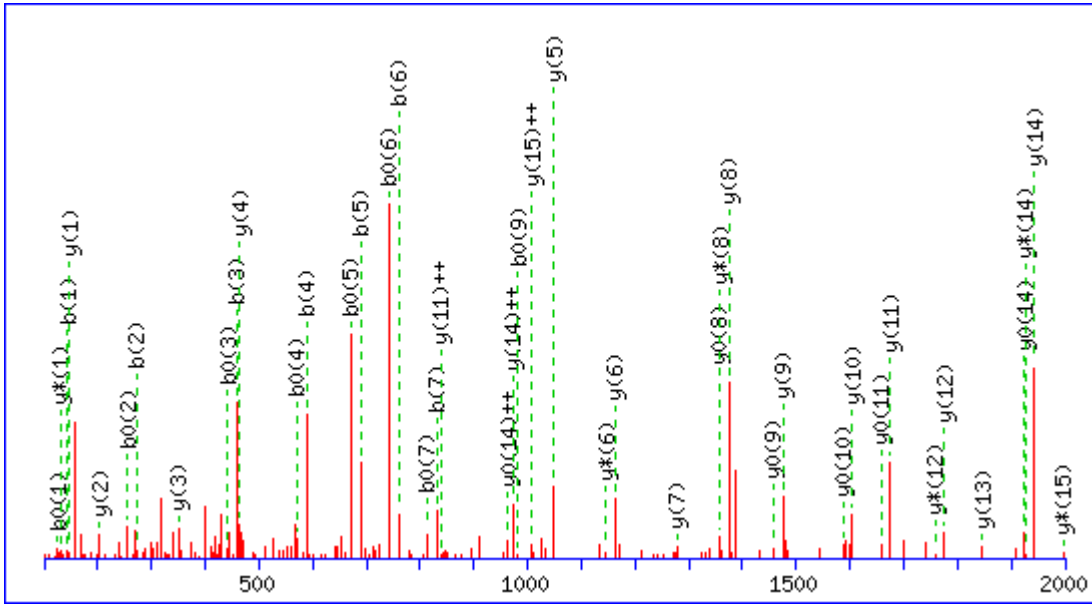


MS/MS Fragmentation of **TEWETAAPAVAETPDIKLFGK**

Found in

P46782

, 40S ribosomal protein S5 OS=Homo sapiens GN=RPS5 PE=1 SV=4

Monoisotopic mass of neutral peptide $M_r(\text{calc})$: 2772.3606

Variable modifications:

N-term : Acetyl (N-term)

K17 : Sumo 3 (K)

Ions Score: 76 Expect: 7e-05

| # | b | b ⁺⁺ | b [*] | b ⁺⁺⁺ | b ⁰ | b ⁰⁺⁺ | Seq. | y | y ⁺⁺ | y [*] | y ⁺⁺⁺ | y ⁰ | y ⁰⁺⁺ | # |
|----|-----------|-----------------|----------------|------------------|----------------|------------------|------|-----------|-----------------|----------------|------------------|----------------|------------------|----|
| 1 | 144.0655 | 72.5364 | | | 126.0550 | 63.5311 | T | | | | | | | 21 |
| 2 | 273.1081 | 137.0577 | | | 255.0975 | 128.0524 | E | 2630.3097 | 1315.6585 | 2613.2831 | 1307.1452 | 2612.2991 | 1306.6532 | 20 |
| 3 | 459.1874 | 230.0974 | | | 441.1769 | 221.0921 | W | 2501.2671 | 1251.1372 | 2484.2405 | 1242.6239 | 2483.2565 | 1242.1319 | 19 |
| 4 | 588.2300 | 294.6186 | | | 570.2195 | 285.6134 | E | 2315.1878 | 1158.0975 | 2298.1612 | 1149.5842 | 2297.1772 | 1149.0922 | 18 |
| 5 | 689.2777 | 345.1425 | | | 671.2671 | 336.1372 | T | 2186.1452 | 1093.5762 | 2169.1186 | 1085.0630 | 2168.1346 | 1084.5709 | 17 |
| 6 | 760.3148 | 380.6610 | | | 742.3042 | 371.6558 | A | 2085.0975 | 1043.0524 | 2068.0709 | 1034.5391 | 2067.0869 | 1034.0471 | 16 |
| 7 | 831.3519 | 416.1796 | | | 813.3414 | 407.1743 | A | 2014.0604 | 1007.5338 | 1997.0338 | 999.0206 | 1996.0498 | 998.5285 | 15 |
| 8 | 928.4047 | 464.7060 | | | 910.3941 | 455.7007 | P | 1943.0233 | 972.0153 | 1925.9967 | 963.5020 | 1925.0127 | 963.0100 | 14 |
| 9 | 999.4418 | 500.2245 | | | 981.4312 | 491.2193 | A | 1845.9705 | 923.4889 | 1828.9440 | 914.9756 | 1827.9599 | 914.4836 | 13 |
| 10 | 1098.5102 | 549.7587 | | | 1080.4997 | 540.7535 | V | 1774.9334 | 887.9703 | 1757.9068 | 879.4571 | 1756.9228 | 878.9651 | 12 |
| 11 | 1169.5473 | 585.2773 | | | 1151.5368 | 576.2720 | A | 1675.8650 | 838.4361 | 1658.8384 | 829.9229 | 1657.8544 | 829.4308 | 11 |
| 12 | 1298.5899 | 649.7986 | | | 1280.5794 | 640.7933 | E | 1604.8279 | 802.9176 | 1587.8013 | 794.4043 | 1586.8173 | 793.9123 | 10 |
| 13 | 1399.6376 | 700.3224 | | | 1381.6270 | 691.3172 | T | 1475.7853 | 738.3963 | 1458.7587 | 729.8830 | 1457.7747 | 729.3910 | 9 |
| 14 | 1496.6904 | 748.8488 | | | 1478.6798 | 739.8435 | P | 1374.7376 | 687.8724 | 1357.7110 | 679.3592 | 1356.7270 | 678.8672 | 8 |
| 15 | 1611.7173 | 806.3623 | | | 1593.7067 | 797.3570 | D | 1277.6848 | 639.3461 | 1260.6583 | 630.8328 | 1259.6743 | 630.3408 | 7 |
| 16 | 1724.8014 | 862.9043 | | | 1706.7908 | 853.8990 | I | 1162.6579 | 581.8326 | 1145.6313 | 573.3193 | | | 6 |
| 17 | 2310.0884 | 1155.5479 | 2293.0619 | 1147.0346 | 2292.0779 | 1146.5426 | K | 1049.5738 | 525.2905 | 1032.5473 | 516.7773 | | | 5 |
| 18 | 2423.1725 | 1212.0899 | 2406.1460 | 1203.5766 | 2405.1619 | 1203.0846 | L | 464.2867 | 232.6470 | 447.2602 | 224.1337 | | | 4 |
| 19 | 2570.2409 | 1285.6241 | 2553.2144 | 1277.1108 | 2552.2304 | 1276.6188 | F | 351.2027 | 176.1050 | 334.1761 | 167.5917 | | | 3 |
| 20 | 2627.2624 | 1314.1348 | 2610.2358 | 1305.6216 | 2609.2518 | 1305.1296 | G | 204.1343 | 102.5708 | 187.1077 | 94.0575 | | | 2 |
| 21 | | | | | | | K | 147.1128 | 74.0600 | 130.0863 | 65.5468 | | | 1 |

