**Supplementary material 4:**

**SWATH acquisition:**

The information dependent acquisition (IDA) experiments were performed for each pooled samples in a total of two acquisitions per pool. The mass spectrometer was set to scanning full spectra (350-1250 m/z) for 250ms, followed by up to 100 MS/MS scans (100–1500 m/z from a dynamic accumulation time – minimum 30 ms for precursor above the intensity threshold of 1000 – in order to maintain a cycle time of 3.298 s). Candidate ions with a charge state between +2 and +5 and counts above a minimum threshold of 10 counts per second were isolated for fragmentation and one MS/MS spectra was collected before adding those ions to the exclusion list for 15 seconds (mass spectrometer operated by Analyst® TF 1.7, ABSciex®). Rolling collision was used with a collision energy spread of 5.

For SWATH-MS based experiments, the mass spectrometer was operated in a looped product ion mode [[1](#_ENREF_1)] and the same chromatographic conditions used as in the IDA run described above. A set of 168 windows (Table S1) of variable (width containing 1 m/z for the window overlap) was constructed covering the precursor mass range of 350-1250 m/z. A 50 ms survey scan (350-1500 m/z) was acquired at the beginning of each cycle for instrument calibration and SWATH MS/MS spectra were collected from 100–1500 m/z for 19 ms resulting in a cycle time of 3.2911 s from the precursors ranging from 350 to 1250 m/z. The collision energy for each window was determined according to the calculation for a charge +2 ion centered upon the window with variable collision energy spread (CES) according with the window.

A specific library of precursor masses and fragment ions was created by combining all files from the IDA experiments, and used for subsequent SWATH processing. Libraries were obtained using ProteinPilotTM software (v5.1, ABSciex®), using the following parameters: i) search against a database composedthe UniProt reviewed database of *Escherichia Coli* (downloaded at May 2019), and MBP-GFP (IS); ii) iodoacetamide alkylated cysteines as fixed modification; iii) trypsin as digestion type. An independent False Discovery Rate (FDR) analysis using the target-decoy approach provided with Protein Pilot software was used to assess the quality of the identifications and positive identifications were considered when identified proteins and peptides reached a 5% local FDR [[2](#_ENREF_2),[3](#_ENREF_3)].

Data processing was performed using SWATHTM processing plug-in for PeakViewTM (v2.0.01, ABSciex®) [[4](#_ENREF_4)]. After retention time adjustment using the MBP-GFP peptides, up to 15 peptides, with up to 5 fragments each, were chosen per protein, and quantitation was attempted for all proteins in library file that were identified from ProteinPilot™ searches.

Peptides’ confidence threshold was determined based on a FDR analysis using the target-decoy approach and those that met the 1% FDR threshold in at least three of the four biological replicates, and with at least 3 transitions were retained. Peak areas of the target fragment ions (transitions) of the retained peptides were extracted across the experiments using an extracted-ion chromatogram (XIC) window of 5 minutes with 100 ppm XIC width.

The levels of the proteins were estimated by summing all the transitions from all the peptides for a given protein that met the criteria described above (an adaptation of [[5](#_ENREF_5)]) and normalized to the total intensity of each sample.

**Table S1 – SWATH-MS method.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | m/z range | Width (Da) | CES |
| **Window 1** | 349.5-394.1 | 44.6 | 5 |
| **Window 2** | 393.1-415.3 | 22.2 | 5 |
| **Window 3** | 414.3-427 | 12.7 | 5 |
| **Window 4** | 426-431.9 | 5.9 | 5 |
| **Window 5** | 430.9-436 | 5.1 | 5 |
| **Window 6** | 435-439.6 | 4.6 | 5 |
| **Window 7** | 438.6-443.2 | 4.6 | 5 |
| **Window 8** | 442.2-446.3 | 4.1 | 5 |
| **Window 9** | 445.3-449.9 | 4.6 | 5 |
| **Window 10** | 448.9-453.1 | 4.2 | 5 |
| **Window 11** | 452.1-456.2 | 4.1 | 5 |
| **Window 12** | 455.2-459.4 | 4.2 | 5 |
| **Window 13** | 458.4-462.4 | 4 | 5 |
| **Window 14** | 461.1-465.2 | 4.1 | 5 |
| **Window 15** | 464.2-468.4 | 4.2 | 5 |
| **Window 16** | 467.4-471.4 | 4 | 5 |
| **Window 17** | 470.1-474.2 | 4.1 | 5 |
| **Window 18** | 473.2-477.2 | 4 | 5 |
| **Window 19** | 475.9-480.1 | 4.2 | 5 |
| **Window 20** | 479.1-483.1 | 4 | 5 |
| **Window 21** | 481.8-485.8 | 4 | 5 |
| **Window 22** | 484.5-488.6 | 4.1 | 5 |
| **Window 23** | 487.6-491.6 | 4 | 5 |
| **Window 24** | 490.3-494.9 | 4.6 | 5 |
| **Window 25** | 493.9-499 | 5.1 | 5 |
| **Window 26** | 498-503.5 | 5.5 | 5 |
| **Window 27** | 502.5-507.5 | 5 | 5 |
| **Window 28** | 506.5-512 | 5.5 | 5 |
| **Window 29** | 511-516.1 | 5.1 | 5 |
| **Window 30** | 515.1-520.1 | 5 | 5 |
| **Window 31** | 519.1-523.7 | 4.6 | 5 |
| **Window 32** | 522.7-527.8 | 5.1 | 5 |
| **Window 33** | 526.8-530.9 | 4.1 | 5 |
| **Window 34** | 529.9-534.1 | 4.2 | 5 |
| **Window 35** | 533.1-537.1 | 4 | 5 |
| **Window 36** | 535.8-539.8 | 4 | 5 |
| **Window 37** | 538.5-542.5 | 4 | 5 |
| **Window 38** | 540.7-544.7 | 4 | 5 |
| **Window 39** | 543.7-547.7 | 4 | 5 |
| **Window 40** | 546.7-550.7 | 4 | 5 |
| **Window 41** | 549.7-553.7 | 4 | 5 |
| **Window 42** | 552.7-556.7 | 4 | 5 |
| **Window 43** | 555.7-559.7 | 4 | 5 |
| **Window 44** | 558.7-562.7 | 4 | 5 |
| **Window 45** | 561.7-565.7 | 4 | 5 |
| **Window 46** | 564.7-568.7 | 4 | 5 |
| **Window 47** | 567.7-571.7 | 4 | 5 |
| **Window 48** | 570.7-574.7 | 4 | 5 |
| **Window 49** | 573.7-577.7 | 4 | 5 |
| **Window 50** | 576.7-580.7 | 4 | 5 |
| **Window 51** | 579.7-583.7 | 4 | 5 |
| **Window 52** | 582.7-586.7 | 4 | 5 |
| **Window 53** | 585.7-589.7 | 4 | 5 |
| **Window 54** | 588.7-592.7 | 4 | 5 |
| **Window 55** | 591.7-595.7 | 4 | 5 |
| **Window 56** | 594.7-598.7 | 4 | 5 |
| **Window 57** | 597.7-601.7 | 4 | 5 |
| **Window 58** | 600.7-604.7 | 4 | 5 |
| **Window 59** | 603.7-607.7 | 4 | 5 |
| **Window 60** | 606.7-610.7 | 4 | 5 |
| **Window 61** | 609.7-613.7 | 4 | 5 |
| **Window 62** | 612.7-616.7 | 4 | 5 |
| **Window 63** | 615.7-619.7 | 4 | 5 |
| **Window 64** | 618.7-622.7 | 4 | 5 |
| **Window 65** | 620.9-624.9 | 4 | 5 |
| **Window 66** | 623.1-627.1 | 4 | 5 |
| **Window 67** | 625.8-629.8 | 4 | 5 |
| **Window 68** | 628.1-632.1 | 4 | 5 |
| **Window 69** | 630.8-634.8 | 4 | 5 |
| **Window 70** | 633-637 | 4 | 5 |
| **Window 71** | 635.7-639.7 | 4 | 5 |
| **Window 72** | 638.4-642.4 | 4 | 5 |
| **Window 73** | 641.1-645.1 | 4 | 5 |
| **Window 74** | 643.8-648 | 4.2 | 5 |
| **Window 75** | 647-651 | 4 | 5 |
| **Window 76** | 649.7-653.7 | 4 | 5 |
| **Window 77** | 652.4-656.5 | 4.1 | 5 |
| **Window 78** | 655.5-659.7 | 4.2 | 5 |
| **Window 79** | 658.7-663.3 | 4.6 | 5 |
| **Window 80** | 662.3-666.9 | 4.6 | 5 |
| **Window 81** | 665.9-670.5 | 4.6 | 5 |
| **Window 82** | 669.5-674.1 | 4.6 | 5 |
| **Window 83** | 673.1-677.7 | 4.6 | 5 |
| **Window 84** | 676.7-681.3 | 4.6 | 5 |
| **Window 85** | 680.3-684.9 | 4.6 | 5 |
| **Window 86** | 683.9-688.5 | 4.6 | 5 |
| **Window 87** | 687.5-692.1 | 4.6 | 5 |
| **Window 88** | 691.1-696.1 | 5 | 5 |
| **Window 89** | 695.1-700.6 | 5.5 | 5 |
| **Window 90** | 699.6-704.7 | 5.1 | 5 |
| **Window 91** | 703.7-708.7 | 5 | 5 |
| **Window 92** | 707.7-712.3 | 4.6 | 5 |
| **Window 93** | 711.3-715.5 | 4.2 | 5 |
| **Window 94** | 714.5-719.1 | 4.6 | 5 |
| **Window 95** | 718.1-722.7 | 4.6 | 5 |
| **Window 96** | 721.7-725.8 | 4.1 | 5 |
| **Window 97** | 724.8-729.4 | 4.6 | 5 |
| **Window 98** | 728.4-733 | 4.6 | 5 |
| **Window 99** | 732-736.2 | 4.2 | 5 |
| **Window 100** | 735.2-739.2 | 4 | 5 |
| **Window 101** | 737.9-742 | 4.1 | 5 |
| **Window 102** | 741-745 | 4 | 5 |
| **Window 103** | 743.7-747.9 | 4.2 | 5 |
| **Window 104** | 746.9-751 | 4.1 | 5 |
| **Window 105** | 750-754 | 4 | 5 |
| **Window 106** | 752.7-756.9 | 4.2 | 5 |
| **Window 107** | 755.9-760 | 4.1 | 5 |
| **Window 108** | 759-763.2 | 4.2 | 5 |
| **Window 109** | 762.2-766.2 | 4 | 5 |
| **Window 110** | 764.9-769 | 4.1 | 5 |
| **Window 111** | 768-772.6 | 4.6 | 5 |
| **Window 112** | 771.6-775.8 | 4.2 | 5 |
| **Window 113** | 774.8-779.4 | 4.6 | 5 |
| **Window 114** | 778.4-783 | 4.6 | 5 |
| **Window 115** | 782-786.1 | 4.1 | 5 |
| **Window 116** | 785.1-789.3 | 4.2 | 5 |
| **Window 117** | 788.3-792.4 | 4.1 | 5 |
| **Window 118** | 791.4-795.6 | 4.2 | 5 |
| **Window 119** | 794.6-799.2 | 4.6 | 5 |
| **Window 120** | 798.2-802.8 | 4.6 | 8 |
| **Window 121** | 801.8-807.3 | 5.5 | 8 |
| **Window 122** | 806.3-811.3 | 5 | 8 |
| **Window 123** | 810.3-815.8 | 5.5 | 8 |
| **Window 124** | 814.8-820.3 | 5.5 | 8 |
| **Window 125** | 819.3-824.8 | 5.5 | 8 |
| **Window 126** | 823.8-829.3 | 5.5 | 8 |
| **Window 127** | 828.3-833.8 | 5.5 | 8 |
| **Window 128** | 832.8-838.3 | 5.5 | 8 |
| **Window 129** | 837.3-843.3 | 6 | 8 |
| **Window 130** | 842.3-848.2 | 5.9 | 8 |
| **Window 131** | 847.2-853.2 | 6 | 8 |
| **Window 132** | 852.2-857.7 | 5.5 | 8 |
| **Window 133** | 856.7-861.7 | 5 | 8 |
| **Window 134** | 860.7-866.2 | 5.5 | 8 |
| **Window 135** | 865.2-870.7 | 5.5 | 8 |
| **Window 136** | 869.7-875.2 | 5.5 | 8 |
| **Window 137** | 874.2-880.2 | 6 | 8 |
| **Window 138** | 879.2-884.7 | 5.5 | 8 |
| **Window 139** | 883.7-889.2 | 5.5 | 8 |
| **Window 140** | 888.2-894.1 | 5.9 | 8 |
| **Window 141** | 893.1-898.6 | 5.5 | 8 |
| **Window 142** | 897.6-903.1 | 5.5 | 8 |
| **Window 143** | 902.1-908.1 | 6 | 8 |
| **Window 144** | 907.1-913 | 5.9 | 8 |
| **Window 145** | 912-919.3 | 7.3 | 8 |
| **Window 146** | 918.3-927.9 | 9.6 | 8 |
| **Window 147** | 926.9-936.4 | 9.5 | 8 |
| **Window 148** | 935.4-945.4 | 10 | 8 |
| **Window 149** | 944.4-955.3 | 10.9 | 8 |
| **Window 150** | 954.3-965.2 | 10.9 | 8 |
| **Window 151** | 964.2-975.6 | 11.4 | 8 |
| **Window 152** | 974.6-986.8 | 12.2 | 8 |
| **Window 153** | 985.8-999.4 | 13.6 | 8 |
| **Window 154** | 998.4-1011.6 | 13.2 | 10 |
| **Window 155** | 1010.6-1023.3 | 12.7 | 10 |
| **Window 156** | 1022.3-1036.8 | 14.5 | 10 |
| **Window 157** | 1035.8-1051.6 | 15.8 | 10 |
| **Window 158** | 1050.6-1067.4 | 16.8 | 10 |
| **Window 159** | 1066.4-1084.5 | 18.1 | 10 |
| **Window 160** | 1083.5-1103.4 | 19.9 | 10 |
| **Window 161** | 1102.4-1121.4 | 19 | 10 |
| **Window 162** | 1120.4-1139.8 | 19.4 | 10 |
| **Window 163** | 1138.8-1159.6 | 20.8 | 10 |
| **Window 164** | 1158.6-1181.7 | 23.1 | 10 |
| **Window 165** | 1180.7-1205.1 | 24.4 | 10 |
| **Window 166** | 1204.1-1228 | 23.9 | 10 |
| **Window 167** | 1227-1249.6 | 22.6 | 10 |
| **Window 168** | 1248.6-1252.6 | 4 | 10 |

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