

## SUPPLEMENTARY INFORMATION

### Sequence Analysis of Hypothetical Proteins from *Helicobacter pylori* 26695 to Identify Potential Virulence Factors

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**Supplementary Table 1.** List of predicted physicochemical parameters by ExPASy's ProtParam tool of 340 HPs from *Helicobacter pylori*

| No. | UniProt ID | Molecular weight, M <sub>w</sub><br>(Da) | Theoretical PI | Extinction coefficient<br>(1/M/cm) | Instability index |                | Aliphatic index | Grand average of hydrophobicity<br>(GRAVY) |
|-----|------------|--|----------------|------------------------------------|-------------------|----------------|-----------------|--|
|     |            |  |                |                                    | Computed          | Classification |                 |  |
| 1   | O24859     | 31,681.1                                 | 5.58           | 32,110                             | 40.25             | Unstable       | 85.49           | -0.298                                     |
| 2   | O24860     | 10,525.7                                 | 8.98           | 17,990                             | 25.82             | Stable         | 126.88          | 1.152                                      |
| 3   | O24861     | 10,006.0                                 | 9.13           | 15,470                             | 26.31             | Stable         | 137.93          | 0.782                                      |
| 4   | O24863     | 53,434.0                                 | 9.03           | 57,315                             | 38.87             | Stable         | 87.57           | -0.236                                     |
| 5   | O24869     | 3,740.6                                  | 10.40          | 12,490                             | 38.97             | Stable         | 84.33           | 0.007                                      |
| 6   | O24871     | 20,649.2                                 | 9.49           | 24,535                             | 31.88             | Stable         | 96.33           | 0.166                                      |
| 7   | O24873     | 67,897.2                                 | 9.39           | 60,990                             | 37.96             | Stable         | 86.36           | -0.406                                     |
| 8   | P56066     | 10,344.0                                 | 5.61           | 9,970                              | 37.91             | Stable         | 92.20           | -0.095                                     |
| 9   | O24894     | 49,556.6                                 | 8.64           | 66,030                             | 32.43             | Stable         | 87.52           | -0.465                                     |
| 10  | O24898     | 7,677.7                                  | 8.66           | 8,605                              | 18.06             | Stable         | 60.87           | -0.355                                     |
| 11  | O24899     | 32,723.6                                 | 5.14           | 3,105                              | 41.56             | Unstable.      | 81.83           | -1.098                                     |
| 12  | O24900     | 93,129.2                                 | 5.10           | 74,190                             | 33.63             | Stable         | 79.67           | 79.67                                      |
| 13  | O24901     | 21,764.9                                 | 5.85           | 20,065                             | 33.09             | Stable         | 80.42           | -0.512                                     |
| 14  | O24902     | 10,516.6                                 | 4.84           | 12,490                             | 49.35             | Unstable       | 74.77           | -0.938                                     |
| 15  | O24903     | 57,408.0                                 | 5.24           | 54,235                             | 46.03             | Unstable       | 82.24           | -0.669                                     |
| 16  | O24904     | 16,102.3                                 | 5.06           | 23,950                             | 29.03             | Stable         | 86.26           | -0.252                                     |
| 17  | O24905     | 14,085.7                                 | 4.73           | 6,085                              | 38.12             | Stable         | 72.56           | -1.121                                     |
| 18  | O24909     | 65,970.3                                 | 4.34           | 48,710                             | 21.81             | Stable         | 58.94           | -0.860                                     |

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|----|--------|----------|-------|--------|-------|----------|--------|--------|
| 19 | O24910 | 4,630.6  | 12.02 | 5,500  | 32.42 | Stable   | 112.25 | 0.145  |
| 20 | P64651 | 7,244.7  | 9.16  | 1,490  | 44.94 | Unstable | 119.52 | 0.031  |
| 21 | O24914 | 52,340.1 | 9.24  | 78,855 | 37.26 | Stable   | 84.09  | -0.341 |
| 22 | O24921 | 20,846.3 | 9.03  | 20,525 | 36.69 | Stable   | 104.72 | -0.359 |
| 23 | O24923 | 26,068.6 | 8.49  | 13,410 | 39.31 | Stable   | 96.96  | 0.165  |
| 24 | O24926 | 42,665.1 | 6.92  | 30,870 | 41.71 | Unstable | 95.68  | -0.344 |
| 25 | O24932 | 21,582.6 | 8.57  | 48,275 | 52.13 | Unstable | 66.18  | -0.656 |
| 26 | O24934 | 27,143.3 | 8.62  | 34,965 | 37.99 | Stable   | 99.22  | -0.189 |
| 27 | O24935 | 11,073.9 | 4.26  | 4,470  | 59.52 | Unstable | 72.76  | -1.000 |
| 28 | O24936 | 72,400.7 | 6.41  | 63,065 | 31.61 | Stable   | 98.33  | -0.209 |
| 29 | P56080 | 34,405.4 | 8.81  | 10,805 | 35.04 | Stable   | 115.26 | 0.055  |
| 30 | O24937 | 45,136.4 | 9.46  | 28,670 | 40.80 | Unstable | 73.34  | -0.934 |
| 31 | O24938 | 53,649.9 | 9.24  | 34,170 | 53.55 | Unstable | 58.63  | -1.256 |
| 32 | O24939 | 45,263.7 | 9.54  | 27,180 | 42.25 | Unstable | 71.18  | -0.948 |
| 33 | P64653 | 4,914.8  | 8.46  | 1,740  | 59.24 | Unstable | 79.30  | 0.065  |
| 34 | O24942 | 4,751.5  | 9.60  | 4,470  | 28.77 | Stable   | 102.44 | -0.210 |
| 35 | O24943 | 16,291.8 | 9.34  | 3,105  | 39.20 | Stable   | 63.05  | -0.984 |
| 36 | O24944 | 32,768.2 | 9.47  | 17,545 | 40.77 | Unstable | 63.43  | -0.848 |
| 37 | O24945 | 4,272.1  | 9.90  | 4,470  | 69.92 | Unstable | 23.64  | -0.415 |
| 38 | P64655 | 5,022.9  | 6.53  | 5,500  | 70.91 | Unstable | 110.91 | -0.075 |
| 39 | O24949 | 23,610.5 | 7.02  | 6,085  | 36.45 | Stable   | 112.37 | -0.051 |
| 40 | O24951 | 27,491.8 | 6.94  | 22,390 | 42.17 | Unstable | 87.40  | -0.200 |
| 41 | O24959 | 7,790.1  | 9.61  | 5,960  | 8.16  | Stable   | 110.44 | -0.062 |
| 42 | O24960 | 22,239.2 | 9.30  | 19,035 | 14.62 | Stable   | 105.98 | 0.205  |

|    |        |          |      |        |       |          |        |        |
|----|--------|----------|------|--------|-------|----------|--------|--------|
| 43 | O24961 | 2,651.7  | 9.50 | 23,045 | 40.71 | Unstable | 102.45 | -0.108 |
| 44 | O24963 | 32,948.5 | 8.56 | 40,465 | 33.89 | Stable   | 111.85 | -0.028 |
| 45 | O24964 | 10,716.3 | 8.01 | 5,960  | 48.40 | Unstable | 101.76 | -0.315 |
| 46 | O24965 | 23,248.0 | 9.03 | 24,870 | 33.00 | Stable   | 105.70 | -0.194 |
| 47 | O24974 | 18,094.6 | 4.83 | 2,980  | 50.33 | Unstable | 88.92  | -0.640 |
| 48 | O24975 | 10,353.9 | 6.29 | 15,470 | 47.20 | Unstable | 98.74  | -0.523 |
| 49 | O24976 | 28,621.8 | 4.63 | 8,480  | 54.33 | Unstable | 72.57  | -0.838 |
| 50 | O24979 | 30,302.0 | 9.24 | 34,965 | 33.26 | Stable   | 113.29 | 0.804  |
| 51 | O24984 | 21,208.4 | 9.30 | 28,420 | 36.78 | Stable   | 80.72  | -0.599 |
| 52 | O24985 | 30,349.7 | 9.23 | 9,970  | 39.88 | Stable   | 69.03  | -0.931 |
| 53 | O24986 | 47,148.9 | 6.70 | 30,620 | 30.33 | Stable   | 86.19  | -0.530 |
| 54 | O24989 | 19,827.8 | 6.58 | 26,595 | 30.38 | Stable   | 140.96 | 0.850  |
| 55 | P56117 | 58,287.1 | 9.39 | 61,770 | 29.79 | Stable   | 93.82  | -0.273 |
| 56 | O24992 | 13,404.2 | 4.56 | 8,605  | 44.27 | Unstable | 100.76 | -0.073 |
| 57 | O24996 | 14,551.1 | 9.21 | 7,700  | 15.74 | Stable   | 85.91  | -0.359 |
| 58 | O25010 | 8,598.8  | 9.52 | 5,960  | 47.49 | Unstable | 62.88  | -1.297 |
| 59 | O25018 | 22,886.4 | 9.50 | 11,920 | 46.46 | Unstable | 66.70  | -0.610 |
| 60 | O25022 | 14,438.9 | 8.44 | 28,545 | 35.77 | Stable   | 91.30  | -0.316 |
| 61 | O25024 | 15,480.0 | 8.71 | 15,930 | 17.39 | Stable   | 96.79  | -0.111 |
| 62 | O25025 | 11,086.6 | 4.69 | 6,990  | 54.85 | Unstable | 103.83 | -0.517 |
| 63 | P64657 | 12,109.9 | 5.50 | 7,450  | 32.82 | Stable   | 73.52  | -0.700 |
| 64 | O25031 | 20,366.3 | 9.56 | 16,055 | 31.57 | Stable   | 121.01 | 0.591  |
| 65 | O25038 | 24,814.9 | 8.40 | 6,990  | 58.28 | Unstable | 97.26  | -0.678 |
| 66 | O25041 | 15,745.8 | 5.06 | 12,950 | 50.88 | Unstable | 81.29  | -0.564 |

|    |        |          |      |        |        |          |        |        |
|----|--------|----------|------|--------|--------|----------|--------|--------|
| 67 | O25042 | 22,706.5 | 9.44 | 19,940 | 43.52  | Unstable | 93.94  | -0.395 |
| 68 | O25047 | 9,457.7  | 5.75 | 5,960  | 27.37  | Stable   | 79.25  | -0.575 |
| 69 | O25048 | 17,944.8 | 9.26 | 25,565 | 33.15  | Stable   | 86.67  | -0.151 |
| 70 | O25049 | 38,558.1 | 5.00 | 19,620 | 43.39  | Unstable | 91.50  | -0.352 |
| 71 | O25051 | 21,002.4 | 8.84 | 19,940 | 36.53  | Stable   | 102.40 | -0.243 |
| 72 | P56132 | 15,175.6 | 8.33 | 11,960 | 33.43  | Stable   | 64.24  | -0.378 |
| 73 | O25053 | 21,035.3 | 5.34 | 14,565 | 27.10  | Stable   | 115.73 | -0.010 |
| 74 | O25058 | 56,163.3 | 8.93 | 40,925 | 40.30  | Unstable | 101.90 | -0.163 |
| 75 | O25061 | 20,110.4 | 6.15 | 21,555 | 45.36  | Unstable | 99.77  | -0.011 |
| 76 | O25065 | 33,699.4 | 6.10 | 30,495 | 37.30  | Stable   | 95.48  | -0.347 |
| 77 | O25075 | 37,588.9 | 8.64 | 67,060 | 48.22  | Unstable | 81.61  | -0.300 |
| 78 | O25076 | 20,384.8 | 9.32 | 15,470 | 17.07  | Stable   | 98.53  | -0.023 |
| 79 | O25081 | 13,817.7 | 6.82 | 19,605 | 20.97  | Stable   | 98.44  | -0.363 |
| 80 | O25085 | 15,304.3 | 6.74 | 3,105  | 32.00  | Stable   | 72.08  | -0.971 |
| 81 | O25104 | 12,223.0 | 8.97 | 5,500  | 44.06  | Unstable | 63.66  | -1.123 |
| 82 | O25105 | 21,977.6 | 9.81 | 35,980 | 40.87  | Unstable | 96.91  | -0.318 |
| 83 | O25107 | 10,319.2 | 8.97 | 6,085  | 43.35  | Unstable | 96.36  | -0.524 |
| 84 | O25108 | 3,517.3  | 9.50 | 5,625  | -0.35  | Stable   | 110.32 | 0.629  |
| 85 | O25109 | 14,986.1 | 9.84 | 26,470 | 34.20  | Stable   | 138.62 | 0.658  |
| 86 | O25123 | 29,760.3 | 9.04 | 45,965 | 45.965 | Stable   | 84.76  | -0.444 |
| 87 | O25131 | 23,210.8 | 7.85 | 11,460 | 29.23  | Stable   | 71.04  | -1.204 |
| 88 | O25145 | 19,843.4 | 9.61 | 17,420 | 31.06  | Stable   | 115.57 | 0.295  |
| 89 | O25146 | 29,031.0 | 9.33 | 22,015 | 55.50  | Stable   | 89.32  | -0.644 |
| 90 | O25147 | 8,590.8  | 4.56 | 2,980  | 40.25  | Unstable | 115.66 | -0.472 |

|     |        |           |      |         |       |          |        |        |
|-----|--------|-----------|------|---------|-------|----------|--------|--------|
| 91  | P64659 | 9,296.5   | 5.55 | 6,085   | 45.88 | Unstable | 91.28  | -0.747 |
| 92  | O25155 | 29,506.3  | 8.72 | 30,370  | 37.65 | Stable   | 98.65  | -0.039 |
| 93  | O25156 | 25,011.0  | 7.68 | 14,690  | 45.51 | Unstable | 104.19 | -0.177 |
| 94  | O25159 | 21,166.7  | 5.36 | 27,390  | 45.42 | Unstable | 86.87  | -0.661 |
| 95  | O25162 | 22,472.8  | 5.04 | 13,980  | 36.17 | Stable   | 100.97 | -0.467 |
| 96  | O25164 | 18,704.9  | 9.50 | 16,180  | 36.01 | Stable   | 88.40  | -0.215 |
| 97  | O25172 | 38,765.4  | 7.09 | 44,390  | 30.16 | Stable   | 104.48 | 104.48 |
| 98  | O25174 | 16,129.6  | 5.24 | 6,085   | 36.11 | Stable   | 103.59 | 0.053  |
| 99  | O34995 | 34,416.6  | 5.04 | 34,170  | 24.24 | Stable   | 76.95  | -0.522 |
| 100 | O34461 | 71,523.9  | 8.87 | 50,685  | 36.59 | Stable   | 86.22  | -0.495 |
| 101 | O25177 | 47,547.4  | 6.23 | 28,475  | 26.70 | Stable   | 90.55  | -0.273 |
| 102 | O34810 | 68,500.5  | 5.43 | 117,495 | 38.91 | Stable   | 84.83  | -0.606 |
| 103 | O25178 | 21,136.3  | 8.44 | 26,595  | 30.24 | Stable   | 82.70  | -0.387 |
| 104 | O25180 | 6,108.1   | 6.70 | -       | 24.66 | Stable   | 85.09  | 0.058  |
| 105 | O25190 | 10,177.0  | 5.08 | 17,085  | 63.11 | Unstable | 119.77 | 0.768  |
| 106 | O25191 | 11,429.8  | 9.96 | 21,095  | 34.25 | Stable   | 111.30 | 0.380  |
| 107 | O25192 | 58,853.9  | 8.98 | 44,490  | 34.40 | Stable   | 81.18  | -0.778 |
| 108 | O25194 | 30,359.6  | 9.82 | 19,285  | 32.73 | Stable   | 32.73  | -0.292 |
| 109 | O25195 | 41,437.3  | 5.36 | 24,660  | 46.35 | Unstable | 88.56  | -0.476 |
| 110 | O25196 | 14,824.1  | 5.24 | 11,710  | 28.42 | Stable   | 103.59 | -0.272 |
| 111 | O25197 | 56,240.4  | 7.92 | 56,645  | 40.02 | Unstable | 81.63  | -0.795 |
| 112 | O25198 | 5,335.0   | 6.25 | -       | 61.05 | Unstable | 75.45  | -1.343 |
| 113 | Q9WXL5 | 11,481.7  | 4.96 | 8,480   | 48.86 | Unstable | 73.72  | -1.495 |
| 114 | O25200 | 120,113.6 | 8.04 | 89,465  | 38.26 | Stable   | 90.74  | -0.521 |

|     |        |           |       |        |       |          |        |        |
|-----|--------|-----------|-------|--------|-------|----------|--------|--------|
| 115 | O25201 | 27,447.4  | 8.31  | 30,495 | 32.22 | Stable   | 82.33  | -0.653 |
| 116 | O25203 | 17,739.2  | 5.02  | 14,440 | 33.71 | Stable   | 108.47 | -0.349 |
| 117 | K4NBS7 | 8,924.0   | 4.82  | 6,990  | 36.29 | Stable   | 75.79  | -0.695 |
| 118 | O25204 | 9,970.8   | 5.64  | 13,980 | 31.44 | Stable   | 125.52 | 0.753  |
| 119 | O25205 | 8,858.2   | 9.70  | 2,980  | 42.57 | Unstable | 102.44 | -0.544 |
| 120 | O25212 | 72,171.7  | 8.95  | 54,375 | 28.16 | Stable   | 92.63  | -0.210 |
| 121 | O25213 | 29,846.0  | 4.87  | 17,880 | 44.47 | Unstable | 98.75  | -0.460 |
| 122 | O25214 | 57,531.2  | 6.09  | 72,450 | 29.80 | Stable   | 96.93  | 96.93  |
| 123 | O25215 | 18,649.4  | 6.11  | 8,605  | 33.64 | Stable   | 99.32  | -0.360 |
| 124 | O25228 | 29,378.6  | 6.14  | 20,315 | 38.47 | Stable   | 84.60  | -0.296 |
| 125 | O34410 | 108,559.3 | 8.00  | 63,720 | 35.77 | Stable   | 81.90  | -0.759 |
| 126 | O25232 | 33,226.0  | 5.14  | 12,950 | 35.95 | Stable   | 86.75  | -0.628 |
| 127 | O25237 | 10,192.7  | 8.71  | 11,460 | 29.34 | Stable   | 72.44  | -0.624 |
| 128 | O25251 | 4,027.7   | 7.82  | 1,615  | 33.12 | Stable   | 07.89  | 0.650  |
| 129 | O25252 | 78,181.9  | 7.48  | 78,200 | 35.31 | Stable   | 88.28  | -0.653 |
| 130 | O25255 | 38,618.3  | 9.22  | 54,780 | 33.04 | Stable   | 78.30  | -0.565 |
| 131 | O25280 | 37,110.3  | 8.49  | 28,545 | 40.83 | Unstable | 88.66  | -0.793 |
| 132 | O25282 | 16,612.6  | 10.28 | 44,460 | 16.17 | Stable   | 104.21 | 0.601  |
| 133 | O25287 | 49,075.9  | 9.19  | 95,370 | 30.45 | Stable   | 63.32  | -0.304 |
| 134 | O25288 | 6,518.3   | 6.71  | 2,980  | 75.85 | Unstable | 85.18  | -0.630 |
| 135 | O25292 | 29,345.4  | 9.21  | 19,535 | 21.95 | Stable   | 102.82 | -0.194 |
| 136 | O25301 | 77,616.6  | 9.16  | 81,600 | 34.57 | Stable   | 96.68  | -0.041 |
| 137 | O25305 | 32,995.6  | 9.50  | 15,930 | 25.39 | Stable   | 104.91 | -0.273 |
| 138 | K4NB13 | 8,242.2   | 7.91  | 6,990  | 30.49 | Stable   | 154.17 | 1.629  |

|     |        |           |       |        |       |          |        |        |
|-----|--------|-----------|-------|--------|-------|----------|--------|--------|
| 139 | O25308 | 110,869.8 | 9.26  | 64,180 | 25.91 | Stable   | 105.46 | -0.182 |
| 140 | O25309 | 37,615.9  | 9.32  | 37,360 | 27.17 | Stable   | 92.19  | -0.173 |
| 141 | O25316 | 6,085.4   | 5.55  | 11,000 | 24.69 | Stable   | 153.52 | 1.181  |
| 142 | O25317 | 55,481.2  | 8.46  | 58,915 | 33.31 | Stable   | 102.06 | 0.058  |
| 143 | O25324 | 21,346.9  | 10.02 | 27,390 | 36.49 | Stable   | 77.99  | -0.022 |
| 144 | O25333 | 8,879.8   | 9.30  | 9,970  | 30.98 | Stable   | 153.16 | 1.257  |
| 145 | O25346 | 79,953.8  | 5.75  | 94,005 | 32.81 | Stable   | 89.05  | -0.537 |
| 146 | O25354 | 16,894.1  | 6.06  | 26,820 | 59.17 | Unstable | 59.17  | -0.321 |
| 147 | O25358 | 8,639.9   | 5.47  | 15,470 | 20.06 | Stable   | 92.27  | -0.201 |
| 148 | O25364 | 15,619.2  | 8.81  | 18,575 | 37.37 | Stable   | 103.33 | -0.303 |
| 149 | O25373 | 47,633.3  | 8.93  | 13,410 | 36.68 | Stable   | 74.90  | -0.928 |
| 150 | O25374 | 39,241.9  | 8.34  | 30,745 | 42.10 | Unstable | 110.86 | -0.094 |
| 151 | P64663 | 20,109.8  | 5.84  | 2,980  | 26.05 | Stable   | 81.58  | -0.772 |
| 152 | O25381 | 53,177.1  | 6.77  | 51,145 | 28.31 | Stable   | 94.90  | -0.317 |
| 153 | O25392 | 13,552.5  | 5.34  | 13,200 | 41.01 | Unstable | 75.79  | -0.006 |
| 154 | O25406 | 38,722.8  | 8.88  | 17,670 | 45.35 | Unstable | 92.19  | -0.096 |
| 155 | O25407 | 18,335.5  | 8.81  | 12,045 | 33.34 | Stable   | 112.28 | 0.137  |
| 156 | O25408 | 43,414.4  | 6.31  | 13,075 | 36.49 | Stable   | 100.89 | -0.220 |
| 157 | O25412 | 13,141.0  | 5.73  | 7,450  | 49.11 | Unstable | 102.72 | -0.344 |
| 158 | O25423 | 17,580.9  | 8.93  | 2,980  | 33.93 | Stable   | 52.70  | -1.316 |
| 159 | O25429 | 41,826.8  | 6.24  | 35,760 | 39.00 | Stable   | 99.66  | -0.400 |
| 160 | O25430 | 11,575.4  | 5.50  | 2,980  | 36.58 | Stable   | 102.38 | -0.358 |
| 161 | O25431 | 66,056.1  | 5.65  | 53,650 | 37.62 | Stable   | 7.84   | -0.635 |
| 162 | O25442 | 48,082.6  | 9.18  | 61,770 | 28.79 | Stable   | 81.38  | -0.537 |



|     |        |          |      |        |       |          |        |        |
|-----|--------|----------|------|--------|-------|----------|--------|--------|
| 163 | O25450 | 23,847.4 | 8.97 | 14,690 | 29.22 | Stable   | 92.33  | -0.168 |
| 164 | O25451 | 6,057.9  | 3.28 | 10,430 | 75.49 | Unstable | 22.29  | -2.171 |
| 165 | O25456 | 23,647.9 | 9.98 | 30,160 | 65.39 | Unstable | 103.30 | -0.221 |
| 166 | O25457 | 21,180.4 | 6.96 | 11,920 | 45.66 | Unstable | 100.22 | -0.210 |
| 167 | O25459 | 47,876.4 | 7.91 | 22,515 | 35.42 | Stable   | 89.88  | -0.149 |
| 168 | O25460 | 11,626.0 | 4.89 | 2,980  | 50.73 | Unstable | 98.53  | -0.583 |
| 169 | O25461 | 30,935.4 | 5.22 | 10,680 | 32.25 | Stable   | 95.73  | -0.249 |
| 170 | O25468 | 26,738.5 | 9.90 | 32,445 | 34.89 | Stable   | 92.42  | -0.255 |
| 171 | O25469 | 10,227.9 | 9.47 | 15,595 | 21.51 | Stable   | 111.67 | -0.093 |
| 172 | O25470 | 49,445.2 | 5.60 | 35,425 | 46.71 | Unstable | 93.87  | -0.388 |
| 173 | O25472 | 18,614.2 | 5.25 | 6,990  | 28.58 | Stable   | 102.91 | -0.558 |
| 174 | O25478 | 5,492.0  | 4.63 | 2,980  | 25.86 | Stable   | 75.42  | -0.660 |
| 175 | O25483 | 32,196.0 | 9.52 | 66,015 | 32.48 | Stable   | 106.20 | 0.262  |
| 176 | O25491 | 12,842.0 | 6.59 | 4,845  | 53.32 | Unstable | 92.04  | -0.448 |
| 177 | O25495 | 17,006.6 | 7.70 | 20,065 | 45.34 | Unstable | 107.97 | -0.207 |
| 178 | O25498 | 18,051.2 | 9.76 | 12,950 | 35.43 | Stable   | 92.55  | -0.250 |
| 179 | O25499 | 13,168.4 | 8.42 | 3,105  | 28.09 | Stable   | 89.82  | -0.197 |
| 180 | O25504 | 33,932.2 | 5.50 | 20,525 | 40.60 | Unstable | 71.44  | -0.793 |
| 181 | O25509 | 24,339.9 | 9.35 | 20,525 | 49.40 | Unstable | 81.37  | -0.535 |
| 182 | O25510 | 63,653.5 | 9.50 | 66,030 | 29.74 | Stable   | 80.07  | -0.075 |
| 183 | O25513 | 27,890.6 | 8.43 | 7,450  | 34.72 | Stable   | 111.84 | -0.187 |
| 184 | O25520 | 11,289.9 | 6.73 | 5,960  | 39.22 | Stable   | 97.50  | -0.525 |
| 185 | O25523 | 35,776.8 | 6.23 | 30,620 | 34.14 | Stable   | 83.19  | -0.507 |
| 186 | O25527 | 42,995.8 | 9.00 | 55,365 | 36.33 | Stable   | 96.95  | -0.215 |

|     |        |           |       |         |       |          |        |        |
|-----|--------|-----------|-------|---------|-------|----------|--------|--------|
| 187 | O25535 | 25,402.0  | 8.80  | 21,890  | 44.11 | Unstable | 91.74  | -0.579 |
| 188 | O25538 | 18,411.2  | 9.30  | 8,940   | 42.74 | Unstable | 100.00 | -0.980 |
| 189 | O25542 | 32,796.4  | 8.82  | 22,015  | 32.54 | Stable   | 81.79  | -0.330 |
| 190 | O25545 | 6,842.9   | 4.99  | 15,470  | 29.29 | Stable   | 121.40 | 0.023  |
| 191 | O25546 | 23,495.7  | 5.56  | 23,950  | 24.71 | Stable   | 94.65  | -0.516 |
| 192 | O25547 | 16,208.4  | 5.16  | 12,950  | 34.31 | Stable   | 97.57  | -0.626 |
| 193 | O25548 | 3,537.3   | 8.25  | -       | 34.63 | Stable   | 113.23 | 0.468  |
| 194 | O25550 | 70,803.0  | 7.56  | 53,220  | 48.17 | Unstable | 88.50  | -0.511 |
| 195 | O25553 | 11,356.1  | 9.79  | 4,595   | 40.94 | Unstable | 72.00  | -1.062 |
| 196 | O25555 | 14,713.7  | 8.80  | 4,595   | 41.30 | Unstable | 68.72  | -1.090 |
| 197 | O25557 | 24,372.9  | 10.11 | 16,515  | 23.29 | Stable   | 81.15  | -0.670 |
| 198 | O25562 | 11,030.0  | 6.19  | 125     | 33.14 | Stable   | 113.13 | 0.045  |
| 199 | O25564 | 58,160.8  | 9.14  | 9,970   | 31.40 | Stable   | 58.63  | -1.230 |
| 200 | O25567 | 23,551.8  | 5.94  | 35,535  | 33.01 | Stable   | 88.31  | -0.463 |
| 201 | O25576 | 16,136.6  | 10.13 | 7,450   | 30.53 | Stable   | 94.13  | -0.317 |
| 202 | O25579 | 274,562.7 | 5.78  | 233,365 | 29.52 | Stable   | 76.74  | -0.413 |
| 203 | O25589 | 18,418.3  | 5.84  | 10,680  | 37.36 | Stable   | 93.85  | -0.158 |
| 204 | O25592 | 13,763.7  | 5.41  | 19,940  | 29.07 | Stable   | 97.39  | -0.541 |
| 205 | O25601 | 13,587.8  | 9.83  | 8,940   | 21.02 | Stable   | 75.58  | -0.222 |
| 206 | O25602 | 39,700.1  | 8.86  | 38,975  | 32.03 | Stable   | 92.97  | -0.223 |
| 207 | O25607 | 21,221.7  | 8.70  | 20,525  | 32.89 | Stable   | 103.72 | 0.043  |
| 208 | O25616 | 51,795.4  | 5.01  | 33,475  | 43.92 | Unstable | 82.89  | -0.574 |
| 209 | O25617 | 41,716.8  | 5.00  | 26,025  | 42.13 | Unstable | 80.44  | -0.645 |
| 210 | O25618 | 50,173.9  | 6.61  | 34,505  | 40.24 | Unstable | 85.69  | -0.604 |

|     |        |          |       |        |       |          |        |        |
|-----|--------|----------|-------|--------|-------|----------|--------|--------|
| 211 | O25619 | 62,576.6 | 5.43  | 19,495 | 39.52 | Stable   | 105.65 | -0.324 |
| 212 | O25624 | 47,710.0 | 8.24  | 45,270 | 30.00 | Stable   | 96.83  | -0.301 |
| 213 | O25625 | 39,810.4 | 9.39  | 40,130 | 45.90 | Unstable | 65.86  | -0.837 |
| 214 | O25630 | 11,409.5 | 8.98  | 8,605  | 13.34 | Stable   | 98.40  | 0.368  |
| 215 | O25632 | 25,974.0 | 9.11  | 36,120 | 29.09 | Stable   | 128.31 | 0.913  |
| 216 | O25635 | 12,441.0 | 9.32  | 10,470 | 54.78 | Unstable | 107.48 | 0.744  |
| 217 | O25636 | 27,541.7 | 8.39  | 22,265 | 38.39 | Stable   | 101.22 | -0.419 |
| 218 | O25637 | 8,887.5  | 9.82  | -      | 17.18 | Stable   | 100.00 | -0.292 |
| 219 | O25641 | 9,574.9  | 4.87  | 11,460 | 41.69 | Unstable | 99.88  | -0.177 |
| 220 | O25642 | 30,853.8 | 5.64  | 23,505 | 44.05 | Unstable | 89.89  | -0.440 |
| 221 | O25644 | 71,434.9 | 7.69  | 56,520 | 39.59 | Stable   | 77.45  | -1.035 |
| 222 | O25647 | 11,380.9 | 8.73  | 5,960  | 22.03 | Stable   | 63.30  | -1.123 |
| 223 | O25648 | 45,957.9 | 8.78  | 28,850 | 42.12 | Unstable | 73.58  | -0.789 |
| 224 | O25651 | 12,293.7 | 5.91  | 4,470  | 60.77 | Unstable | 75.10  | -1.066 |
| 225 | K4ND94 | 6,379.6  | 9.57  | 8,940  | 58.17 | Unstable | 121.51 | 0.117  |
| 226 | O25667 | 46,796.4 | 9.73  | 76,670 | 19.40 | Stable   | 81.11  | -0.100 |
| 227 | O25672 | 19,212.0 | 9.50  | 27,515 | 28.75 | Stable   | 77.27  | -0.485 |
| 228 | O25673 | 20,294.4 | 7.07  | 10,430 | 25.17 | Stable   | 93.15  | -0.217 |
| 229 | O25689 | 10,381.5 | 10.08 | 7,240  | 33.61 | Stable   | 84.38  | -0.426 |
| 230 | O25691 | 16,060.5 | 6.82  | 11,920 | 25.45 | Stable   | 82.93  | -0.074 |
| 231 | O25694 | 48,295.3 | 9.54  | 42,650 | 22.29 | Stable   | 97.77  | -0.242 |
| 232 | O25704 | 10,871.9 | 9.42  | 18,700 | 30.83 | Stable   | 99.57  | -0.053 |
| 233 | O25705 | 15,513.0 | 6.02  | 10,220 | 20.23 | Stable   | 106.96 | 0.198  |
| 234 | O07680 | 10,006.1 | 9.89  | 9,190  | 20.46 | Stable   | 98.81  | 0.415  |

|     |        |           |       |         |       |          |        |        |
|-----|--------|-----------|-------|---------|-------|----------|--------|--------|
| 235 | O25707 | 31,440.2  | 9.31  | 21,890  | 29.95 | Stable   | 86.37  | -0.677 |
| 236 | O25708 | 50,233.2  | 9.00  | 51,465  | 46.44 | Unstable | 94.18  | -0.270 |
| 237 | O25709 | 19,288.1  | 4.65  | 3,105   | 46.04 | Unstable | 104.97 | -0.178 |
| 238 | O25710 | 27,122.1  | 6.25  | 27,515  | 25.65 | Stable   | 90.22  | -0.707 |
| 239 | O25713 | 23,736.8  | 9.52  | 19,035  | 36.73 | Stable   | 92.42  | -0.086 |
| 240 | O25717 | 19,691.3  | 4.43  | 30,035  | 23.16 | Stable   | 99.77  | -0.027 |
| 241 | O25721 | 90,792.8  | 5.54  | 63,775  | 42.24 | Unstable | 96.95  | -0.342 |
| 242 | O25726 | 13,486.5  | 5.30  | 20,065  | 22.74 | Stable   | 110.00 | -0.066 |
| 243 | O25727 | 3,432.2   | 10.90 | -       | 36.02 | Stable   | 150.97 | 0.526  |
| 244 | O25734 | 51,103.2  | 9.50  | 135,695 | 36.03 | Stable   | 60.09  | -0.393 |
| 245 | O25741 | 25,672.4  | 4.84  | 9,970   | 37.35 | Stable   | 87.81  | -0.679 |
| 246 | O34410 | 108,559.3 | 8.00  | 63,720  | 35.77 | Stable   | 81.90  | -0.759 |
| 247 | O25745 | 16,945.4  | 6.38  | 4,470   | 31.09 | Stable   | 95.49  | -0.455 |
| 248 | O25747 | 8,598.9   | 8.96  | 2,980   | 37.76 | Stable   | 95.00  | -0.561 |
| 249 | K4NFN1 | 7,964.5   | 9.87  | 7,115   | 39.72 | Stable   | 80.29  | 0.188  |
| 250 | O25749 | 38,377.7  | 9.37  | 37,360  | 57.27 | Unstable | 80.00  | -0.826 |
| 251 | O25761 | 88,752.5  | 5.56  | 90,355  | 38.72 | Stable   | 78.35  | -0.785 |
| 252 | O25762 | 50,644.4  | 5.30  | 30,285  | 43.21 | Unstable | 78.41  | -0.913 |
| 253 | O25768 | 12,710.6  | 7.80  | 6,085   | 18.71 | Stable   | 77.91  | -0.293 |
| 254 | O25787 | 20,585.8  | 8.95  | 13,535  | 23.84 | Stable   | 86.78  | -0.367 |
| 255 | O25799 | 43,994.1  | 9.56  | 28,670  | 46.34 | Unstable | 70.47  | -0.988 |
| 256 | O25803 | 10,282.0  | 9.93  | 1,490   | 19.17 | Stable   | 78.60  | -0.756 |
| 257 | K4NT00 | 7,215.4   | 9.87  | 1,490   | 10.06 | Stable   | 96.03  | -0.249 |
| 258 | O25808 | 25,560.1  | 5.91  | 23,380  | 39.72 | Stable   | 8.29   | -0.317 |

|     |        |          |       |        |       |          |        |        |
|-----|--------|----------|-------|--------|-------|----------|--------|--------|
| 259 | O25816 | 18,699.6 | 8.20  | 32,805 | 47.32 | Unstable | 128.81 | 0.686  |
| 260 | O25818 | 7,628.7  | 9.39  | 10,095 | 68.93 | Unstable | 82.06  | -0.637 |
| 261 | O25831 | 17,360.4 | 5.25  | 10,430 | 50.37 | Unstable | 70.26  | -0.710 |
| 262 | O25834 | 22,149.4 | 5.57  | 20,065 | 47.78 | Unstable | 100.71 | -0.590 |
| 263 | O25839 | 9,111.2  | 6.19  | 1,490  | 27.02 | Stable   | 65.53  | -1.197 |
| 264 | O25843 | 21,396.7 | 9.06  | 11,460 | 48.88 | Unstable | 81.25  | -0.547 |
| 265 | O25848 | 17,843.4 | 10.07 | 19,940 | 33.49 | Stable   | 98.25  | 0.269  |
| 266 | O25854 | 8,926.3  | 6.58  | 5,500  | 35.52 | Stable   | 88.55  | -0.337 |
| 267 | O25855 | 37,229.7 | 5.68  | 32,110 | 52.80 | Unstable | 103.26 | -0.158 |
| 268 | O25864 | 92,524.5 | 8.90  | 95,955 | 35.72 | Stable   | 93.06  | -0.423 |
| 269 | O25866 | 10,736.1 | 6.09  | 8,480  | 25.07 | Stable   | 63.51  | -1.218 |
| 270 | O25870 | 56,944.3 | 9.34  | 56,075 | 36.70 | Stable   | 90.47  | -0.195 |
| 271 | O25872 | 26,297.4 | 9.30  | 35,535 | 42.03 | Unstable | 90.35  | -0.452 |
| 272 | O25873 | 20,614.7 | 9.20  | 12,950 | 18.55 | Stable   | 77.64  | -0.419 |
| 273 | O25875 | 13,775.7 | 7.66  | 15,720 | 23.85 | Stable   | 70.91  | 0.017  |
| 274 | O25881 | 22,967.7 | 9.52  | 18,910 | 32.92 | Stable   | 101.49 | -0.053 |
| 275 | O25882 | 9,611.9  | 8.98  | 1,615  | 33.74 | Stable   | 78.80  | -0.949 |
| 276 | O25884 | 13,829.3 | 9.62  | 13,980 | 11.65 | Stable   | 92.80  | -0.131 |
| 277 | O25886 | 38,611.7 | 8.94  | 27,390 | 41.23 | Unstable | 100.41 | -0.275 |
| 278 | O25888 | 13,303.2 | 9.51  | 13,075 | 40.65 | Unstable | 138.09 | 0.976  |
| 279 | O25891 | 44,223.9 | 9.23  | 10,680 | 46.15 | Unstable | 90.52  | -0.552 |
| 280 | O25892 | 26,487.8 | 9.28  | 20,650 | 40.31 | Unstable | 93.62  | -0.616 |
| 281 | O25894 | 29,728.8 | 9.14  | 27,765 | 39.01 | Stable   | 97.19  | -0.283 |
| 282 | O25904 | 44,395.2 | 8.92  | 40,465 | 29.34 | Stable   | 110.85 | 0.086  |

|     |        |          |       |         |       |          |        |        |
|-----|--------|----------|-------|---------|-------|----------|--------|--------|
| 283 | O25906 | 34,798.8 | 7.03  | 36,330  | 46.00 | Unstable | 90.14  | -0.702 |
| 284 | O25913 | 21,310.9 | 7.67  | 29,700  | 34.76 | Stable   | 109.78 | 0.067  |
| 285 | O25930 | 26,256.4 | 9.32  | 41,830  | 45.11 | Unstable | 81.14  | -0.504 |
| 286 | O25932 | 8,868.4  | 9.52  | 15,470  | 13.93 | Stable   | 110.13 | 0.279  |
| 287 | O25933 | 15,475.4 | 8.76  | 20,525  | 48.38 | Unstable | 67.46  | -1.034 |
| 288 | O25934 | 18,193.6 | 10.04 | 12,950  | 32.06 | Stable   | 125.62 | 0.097  |
| 289 | O25935 | 7,875.9  | 5.02  | 4,720   | 41.12 | Unstable | 68.82  | -0.603 |
| 290 | K4NTI9 | 12,369.5 | 9.08  | 14,565  | 47.35 | Unstable | 99.35  | -0.096 |
| 291 | O25938 | 18,018.4 | 7.59  | 10,220  | 54.19 | Unstable | 62.82  | -1.117 |
| 292 | O25939 | 7,120.0  | 5.36  | 3,105   | 62.30 | Unstable | 60.17  | -0.992 |
| 293 | O25940 | 19,097.2 | 4.50  | 4,720   | 37.20 | Stable   | 66.45  | -1.193 |
| 294 | O25941 | 10,960.1 | 4.68  | 8,480   | 46.66 | Unstable | 82.76  | -0.680 |
| 295 | O25942 | 51,095.6 | 9.34  | 26,485  | 37.09 | Stable   | 94.87  | -0.517 |
| 296 | O34810 | 68,500.5 | 5.43  | 117,495 | 38.91 | Stable   | 84.83  | -0.606 |
| 297 | O34461 | 71,523.9 | 8.87  | 50,685  | 36.59 | Stable   | 86.22  | -0.495 |
| 298 | O34995 | 34,416.6 | 5.04  | 34,170  | 24.24 | Stable   | 76.95  | -0.522 |
| 299 | O25960 | 13,011.9 | 4.84  | 11,460  | 40.67 | Unstable | 111.42 | -0.142 |
| 300 | O25966 | 9,385.0  | 9.55  | 10,095  | 45.15 | Unstable | 102.14 | -0.148 |
| 301 | O25967 | 23,434.2 | 9.83  | 33,920  | 27.92 | Stable   | 83.35  | -0.356 |
| 302 | O25974 | 99,279.0 | 8.72  | 93,670  | 33.37 | Stable   | 78.21  | -0.540 |
| 303 | O25977 | 9,599.3  | 9.30  | 8,730   | 83.17 | Unstable | 79.76  | -0.343 |
| 304 | O25978 | 27,734.5 | 6.54  | 24,410  | 42.02 | Unstable | 93.05  | -0.464 |
| 305 | O25979 | 38,761.2 | 7.05  | 35,090  | 29.19 | Stable   | 87.69  | -0.565 |
| 306 | O25981 | 29,361.8 | 8.65  | 40,590  | 32.26 | Stable   | 86.64  | -0.187 |

|     |        |           |      |         |       |          |        |        |
|-----|--------|-----------|------|---------|-------|----------|--------|--------|
| 307 | O25990 | 30,136.7  | 6.14 | 21,890  | 32.84 | Stable   | 98.22  | -0.463 |
| 308 | O25993 | 33,870.7  | 9.31 | 29,465  | 31.68 | Stable   | 91.72  | -0.379 |
| 309 | O25994 | 14,738.6  | 9.44 | 30,605  | 19.11 | Stable   | 103.54 | 0.006  |
| 310 | O25998 | 20,480.2  | 6.54 | 27,055  | 41.41 | Unstable | 57.27  | -1.008 |
| 311 | O25999 | 24,840.7  | 9.17 | 13,075  | 36.30 | Stable   | 98.49  | -0.084 |
| 312 | O26000 | 30,489.2  | 8.34 | 19,035  | 23.29 | Stable   | 101.00 | -0.120 |
| 313 | O26006 | 45,084.6  | 8.14 | 40,130  | 31.74 | Stable   | 85.31  | -0.309 |
| 314 | O26007 | 77,049.7  | 8.18 | 58,595  | 43.14 | Unstable | 91.19  | -0.513 |
| 315 | O26014 | 96,653.8  | 6.18 | 101,540 | 35.21 | Stable   | 92.83  | -0.423 |
| 316 | O26015 | 30,759.2  | 5.20 | 43,680  | 34.94 | Stable   | 92.34  | -0.188 |
| 317 | O26019 | 21,466.7  | 9.03 | 8,940   | 35.75 | Stable   | 87.79  | -0.336 |
| 318 | O26020 | 42,545.2  | 7.16 | 38,975  | 42.21 | Unstable | 121.70 | 0.582  |
| 319 | O26021 | 41,089.8  | 8.80 | 44,600  | 29.90 | Stable   | 113.56 | 0.621  |
| 320 | O26022 | 57,011.9  | 9.16 | 40,800  | 33.25 | Stable   | 100.76 | -0.089 |
| 321 | O26025 | 10,120.9  | 6.57 | 3,105   | 54.16 | Unstable | 112.70 | -0.087 |
| 322 | O26026 | 23,947.2  | 5.00 | 16,390  | 46.42 | Unstable | 87.59  | -0.437 |
| 323 | O26035 | 39,025.2  | 8.51 | 22,960  | 39.16 | Stable   | 97.62  | -0.294 |
| 324 | O26041 | 12,441.4  | 9.99 | 9,970   | 49.05 | Unstable | 94.91  | -0.153 |
| 325 | O26042 | 97,384.6  | 9.05 | 134,555 | 28.43 | Stable   | 71.74  | -0.488 |
| 326 | O26045 | 22,018.9  | 9.57 | 28,880  | 32.99 | Stable   | 96.37  | -0.047 |
| 327 | O26046 | 149,716.0 | 7.14 | 157,070 | 25.80 | Stable   | 92.23  | -0.541 |
| 328 | O26047 | 11,218.7  | 8.86 | 2,980   | 39.89 | Stable   | 82.11  | -0.789 |
| 329 | O26055 | 54,783.7  | 6.63 | 40,715  | 51.11 | Unstable | 71.04  | -0.846 |
| 330 | O26058 | 20,200.3  | 5.42 | 9,190   | 40.07 | Unstable | 100.72 | 0.107  |

|     |        |          |      |        |       |          |        |        |
|-----|--------|----------|------|--------|-------|----------|--------|--------|
| 331 | P64665 | 9,098.7  | 5.14 | –      | 45.63 | Unstable | 114.81 | –0.078 |
| 332 | O26063 | 26,845.4 | 9.24 | 18,910 | 38.10 | Stable   | 70.13  | –0.710 |
| 333 | O26088 | 20,878.0 | 9.39 | 17,085 | 19.21 | Stable   | 82.57  | –0.612 |
| 334 | O26089 | 22,824.9 | 8.57 | 14,440 | 60.25 | Unstable | 78.68  | –0.468 |
| 335 | O26095 | 9,981.6  | 5.26 | 9,970  | 31.39 | Stable   | 108.33 | 0.091  |
| 336 | O26099 | 16,473.1 | 6.31 | 4,595  | 3660  | Stable   | 102.39 | –0.240 |
| 337 | O26100 | 24,548.7 | 9.62 | 51,130 | 30.64 | Stable   | 97.09  | 0.263  |
| 338 | O26107 | 28,417.6 | 5.45 | 27,640 | 39.02 | Stable   | 98.70  | –0.202 |
| 339 | K4NEW8 | 23,058.7 | 8.81 | 26,150 | 4.95  | Unstable | 101.88 | –0.038 |
| 340 | O26108 | 4,636.1  | 4.20 | 4,470  | 46.53 | Unstable | 82.56  | –0.621 |

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HPs, hypothetical proteins; PI, isoelectric point.