**S2 Table. Recombinant proteins.** Expression and purification of PilG recombinant proteins. All constructs contain a C-terminal 6× His-tag predicted to be located in the cytoplasm.

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| **Construct [included amino acids]** | **Trans-membrane helices (TMH) (predicted)** | **Expression** | **Solubility and purification** |
| 1-60 | 0 | Yes | soluble without DDM† |
| 1-80 | 0 | Yes | soluble without DDM |
| 1-81 | 0 | Yes | soluble without DDM |
| 30-80 | 0 | Yes | isolated as inclusion bodies and purified using urea |
| 30-81 | 0 | Yes | isolated as inclusion bodies and purified using urea |
| 1-93 | 0 | No‡ |  |
| 30-93 | 0 | No |  |
| 1-110 | 0 | No |  |
| 1-140 | 0 | Yes | soluble in DDM although lacking TMH |
| 30-140 | 0 | No |  |
| 1-178 | 0 | Yes | soluble in DDM although lacking TMH |
| 1-256 | 2 | Yes | soluble in DDM |
| 257-410 | 2 | Yes | soluble in DDM and lysozyme, unstable |
| 179-410 | 4 | No |  |
| 166-410 | 4 | Yes | soluble in DDM |
| FL / 1-410 | 4 | Yes | soluble in DDM |

† DDM = n-Dodecyl β-D-maltoside  
‡ No = no detection with anti-His-tag or anti-PilG antibodies