Yanagisawa et al., Fig.S7



E. coli GntX (Calcd.mass 27731)

MRGSHHHHHHTDPALRP

MLTVPGLCWLCRMPLALGHWGICSVCSRATR TDKTLCPQCGLPATHSHLPCGRCLQKPPPWQ RLVTVADYAPPLSPLIHQLKFSRRSEIASALSRL LLLEVLHARRTTGLQLPDRIVSVPLWQRRHWR RGFNQSDLLCQPLSRWLHCQWDSEAVTRTRA TATQHFLSARLRKRNLKNAFRLELPVQGRHMV IVDDVVTTGSTVAEIAQLLLRNGAAAVQVWCLC



Western blot (EF-P)

Fig. S7. Restoration of production of the *E. coli* GntX protein, containing proline stretches, in *efp*-deficient cells.

3 (A) Amino acid sequence of E. coli GntX. Proline stretches in GntX are colored red. (B) 4 Plasmids pMW119, pMW-NmE, pMW-NmED, and pMW-EcEGY were cotransformed $\mathbf{5}$ with the GntX plasmid into *E. coli* BW25113 and JW4107 (BW25113 Δ*efp::kan*) cells. 6 Whole-cell proteins were subjected to SDS-PAGE, and analyzed for the production of 7 the full-length GntX protein. Lane 1: molecular mass standards; lane 2: 8 BW25113/pMW119; lane 3: BW25113/pMW-NmE; lane 4: BW25113/pMW-NmED; 9 lane 5: BW25113/pMW-*Ec*EGY; lane 6: JW4107/pMW119; lane 7: 10 JW4107/pMW-NmE; lane 8: JW4107/pMW-NmED; lane 9: JW4107/pMW-EcEGY; 11 lane 10, MagicMark molecular mass standards. (C) The GntX protein was recognized 12by an anti-His₆-antibody. (D) Detection of the expressed N. meningitidis EF-P using an 13anti-EF-P antibody.

14