Effects of altered TatC proteins on protein secretion efficiency via the twin-arginine translocation pathway of *Bacillus subtilis*

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**Table S2.** Overview of effects of amino acid substitution in TatC proteins on substrate translocation.

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<th>Ec. TatC</th>
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The effects of site-directed or random mutagenesis in the TatC proteins on the translocation or binding of various Tat-dependent substrates is indicated: +, no effect on protein translocation or binding was observed; +/-, the effect on substrate secretion or binding varied from mild to severe; -, substrate translocation or binding was completely abolished. spTorA-fusion represents several reporter proteins fused to the signal peptide of TorA, such as TorA-GFP (Allen et al., 2002), TorA-MalE (Kreuzenbeck et al., 2007) and TorA-GFP-SsrA (Strauch & Georgiou, 2007). Residues located in the cytoplasmic N-terminus are indicated with (N), in the first transmembrane domain with (I), in the first periplasmic/outer loop with (P), in the second transmembrane domain with (II), in the first cytoplasmic loop with (C), in the third transmembrane domain with (III), in the second periplasmic loop with (P2), in the fourth transmembrane domain with (IV), in the second cytoplasmic loop with (C2), in the fifth transmembrane domain with (V), in the third periplasmic loop with (P3) and in the sixth transmembrane domain with (VI). E.c., *Escherichia coli*; B.s., *B. subtilis*. *, This mutation has been shown to cause disintegration of the TatABC complex (Barrett et al., 2005); K, Kreuzenbeck et al., 2007 (random suppressor mutants, substrate translocation); A, Allen et al., 2002 (site-directed mutagenesis, substrate translocation); B, Buchanan et al., 2002 (site-directed mutagenesis, substrate translocation); D, McDevitt et al., 2006 (site-directed mutagenesis, substrate binding); H, Holzapfel et al., 2007 (site-directed mutagenesis, substrate translocation and binding); S, Strauch & Georgiou, 2007 (random suppressor mutants, substrate translocation).

**REFERENCES**


