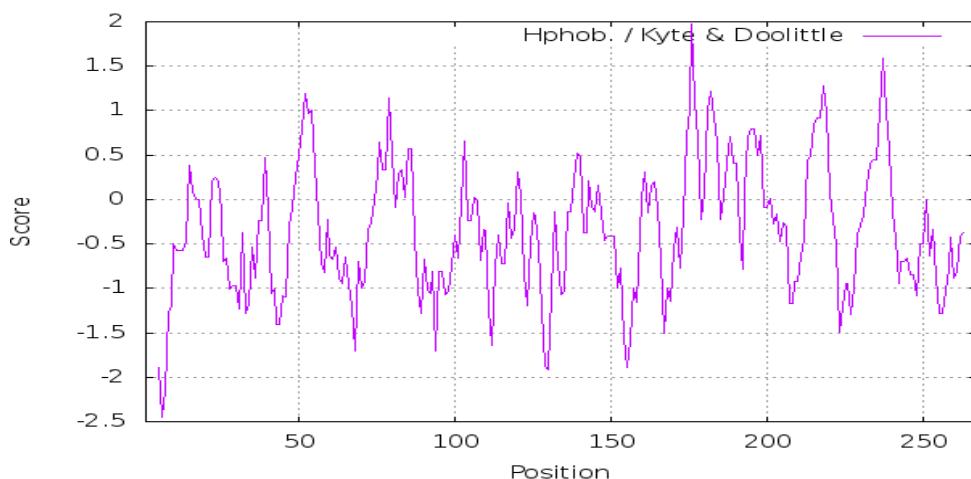


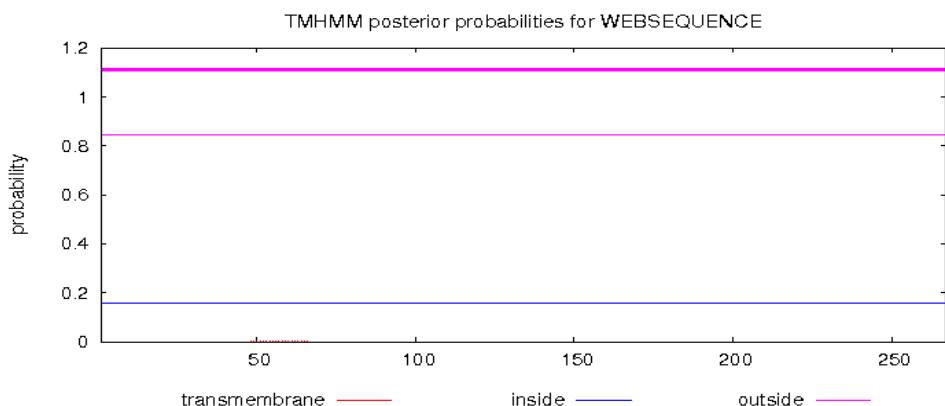
## Figure S1 Bioinformatic analysis of PstB

**(A) Hydrophobicity analysis.** The hydrophobicity analysis was performed using software ProtScale (<https://web.expasy.org/protscale/>).



**(B) Transmembrane domain analysis.** The transmembrane domain was analyzed using the software TMHMM (<http://www.cbs.dtu.dk/services/TMHMM/>).

```
# WEBSEQUENCE Length: 267
# WEBSEQUENCE Number of predicted TMHs: 0
# WEBSEQUENCE Exp number of AAs in TMHs: 0.00635
# WEBSEQUENCE Exp number, first 60 AAs: 0.00262
# WEBSEQUENCE Total prob of N-in: 0.15608
WEBSEQUENCE      TMHMM2.0      outside      1      267
```



**(C) Antigenicity analysis.** The antigenicity was analyzed using Protean software of DNAStar package.

