

Supplementary material for:

Immunoassays for the detection and differentiation of *Paenibacillus larvae*, the etiological agent of American foulbrood (AFB) in honey bees

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primer name	primer sequences	Used for	Reference
NdeI_SplA	5'-GTG AAT CAT ATG ATG AGG AAT ATG GGC TCC G-3'	recombinant production	this study
XhoI_SplA	5'-TTA GTT CTC GAG TTA AAG GTT TTT AAC AAG ATT ACC AGC-3'		
S-layer-F2	5'-ACT ATC AGC AAA TCG TTA TTG AAG G -3'	sequence analysis	Poppinga et al. 2012
S-layer-F3	5'-TAT TAA ACC TGG AAA AGT AGA TGT CC -3'		Poppinga et al. 2012
S-layer-F5	5'-AAG ATT TAA TTG AAA CTC TTA ATG CAG-3'		Poppinga et al. 2012
S-layer-R1	5'-CTG TTT TTT CGT TAA GCA TGG TT -3'		Poppinga et al. 2012
S-layer-R2	5'-TCA ACT GTT GTT GCA CCG G -3'		Poppinga et al. 2012
S-layer-R4	5'- AAT CCG CAG AAC CTT TAG CA -3'		Poppinga et al. 2012
T7	5'-TAA TAC GAC TCA CTA TAG GG-3'		Eurofins Genomics
T7_term	5'-CTA GTT ATT GCT CAG CGG T-3'		Eurofins Genomics

Supplementary Table S1: Primers used for recombinant production of SplA and sequence analysis of pET28(+)_splA.

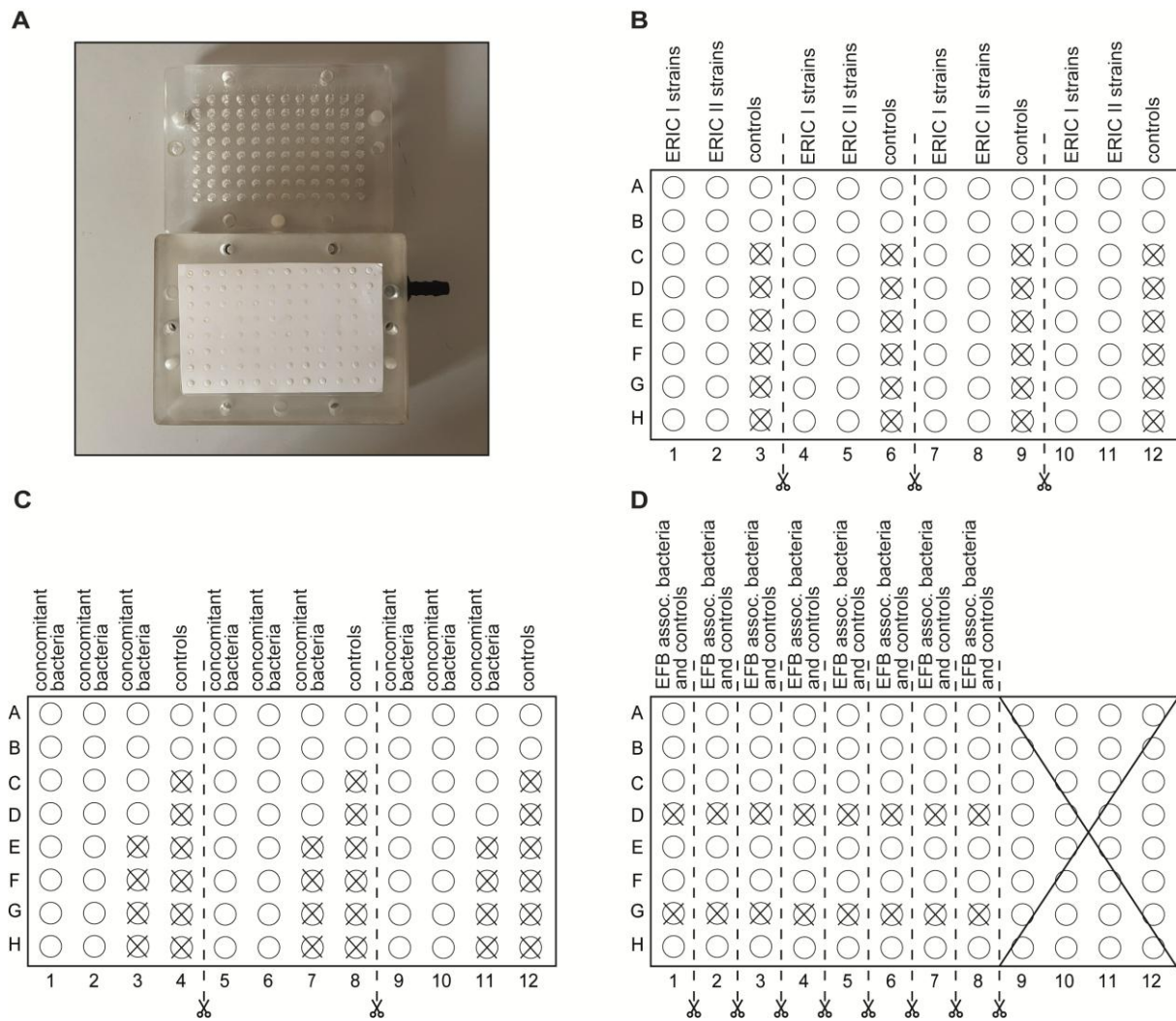


Figure S1: **Loading scheme dot blot.** (A) Picture of 96-pocket transfer device with loaded membrane. (B) Loading scheme of dot blot for testing *P. larvae* ERIC I (n=8) and ERIC II (n=8) strains. (C) Loading scheme of dot blot for testing concomitant bacteria (n=20). (D) Loading scheme of dot blot for testing EFB causing and associated bacteria (n=3). The Membranes were cut vertically along the dotted lines, after samples were blotted onto the membrane. Spots marked with an X were not loaded with sample material.

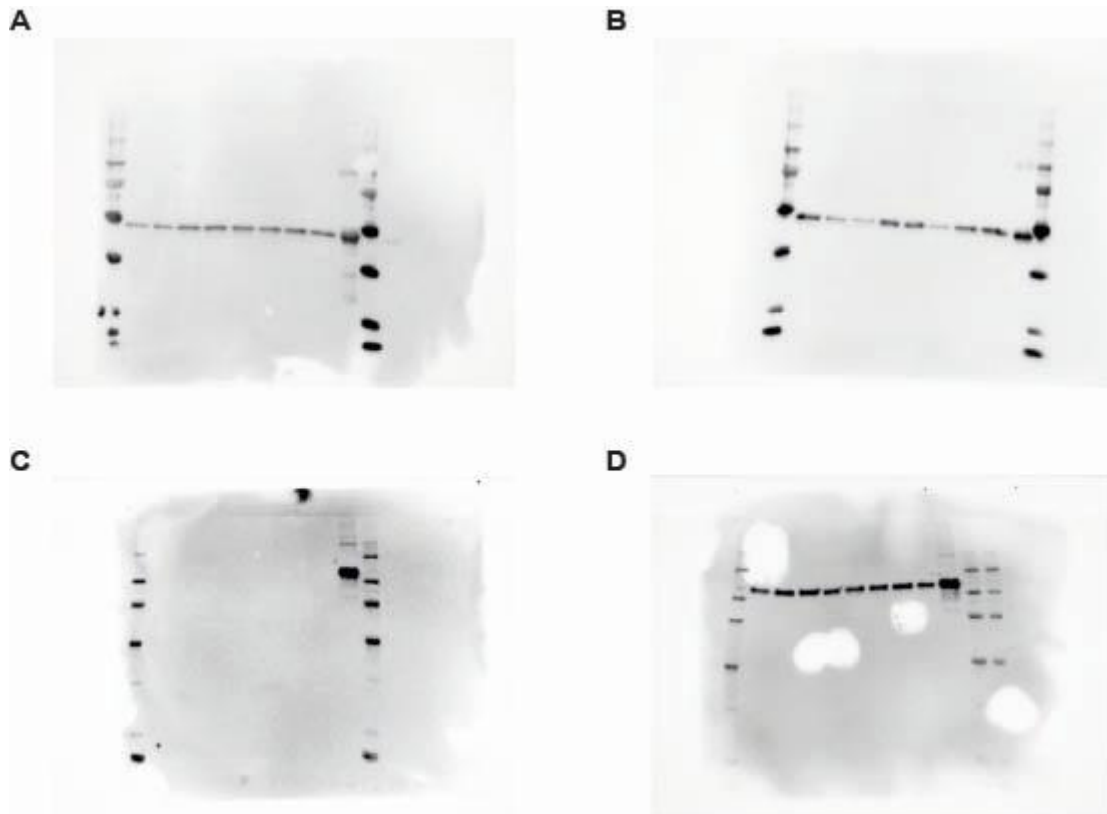


Figure S2: **Original full length western blots shown in Figure 1.** (Evaluation of antibody specificity by western blot. Testing of α -P/CBP49 mAb1 with eight different strains of *P. larvae* ERIC I (A) and eight different strains of *P. larvae* ERIC II (B); native P/CBP49 served as a positive control. Testing of α -SplA mAb2 with eight different strains of *P. larvae* ERIC I (C) and eight different strains of *P. larvae* ERIC II (D); recSplA served as a positive control. The Precision Plus Protein WesternC Blotting Standard (Bio-Rad, Feldkirchen, Germany) served as a molecular weight marker for all blots.)