



Figure S4. PspA patterns of WU2 and EF3030 wild type or different isogenic mutants. Total cell lysates of *Spn* WU2, EF3030, isogenic *pspA* mutants (*WU2ΔpspA* and EF3030-01), isogenic *pspA* mutants (*WU2ΔNPB*), EF3030 expressing PspA_{WU2} (EF3030-04) and EF3030 expressing PspA_{WU2} without NPB (EF3030-05) were electrophorized on SDS-PAGE. Subsequently, expressed PspA were detected by using monoclonal anti-PspA antibody.