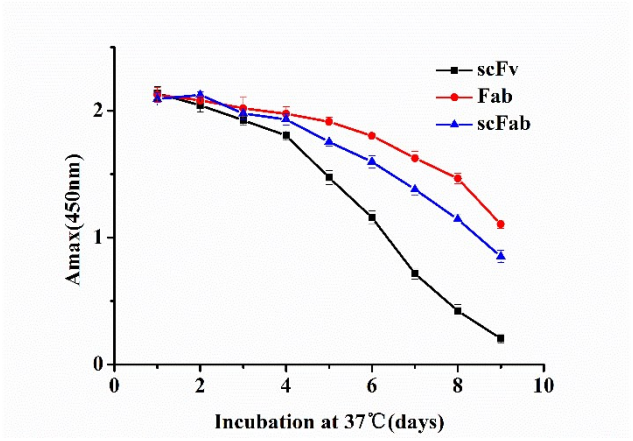
Electronic Supplementary Material (ESI) for Analytical Methods.

Supplement document

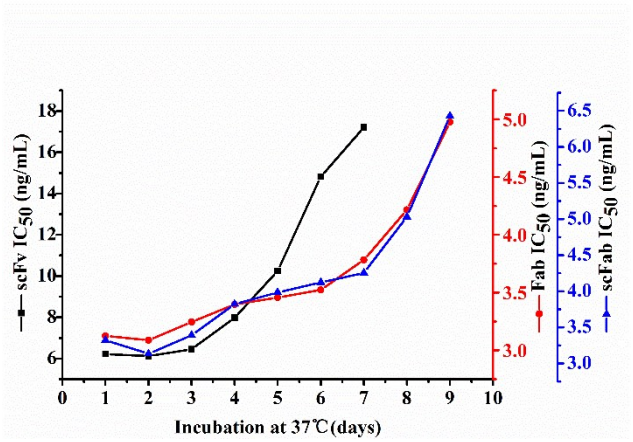
Table S1 Reactivity against coating antigen of the periplasmic extracts of scFab, scFv and Fab (n=3)[a]

	Fab[b]±S	Fab[c]±S	scFv±S	scFab±S
A_{450nm}[d]	0.472±0.045	2.271±0.042	2.167±0.036	2.026±0.039

[a] For one recombinant protein, three samples against coating antigen were determined by icELISA. [b] the periplasmic extracts of Fab; [c] periplasmic extracts of Fab was concentrated 4 times; [d] A_{450nm}, Absorbance at 450 nm.

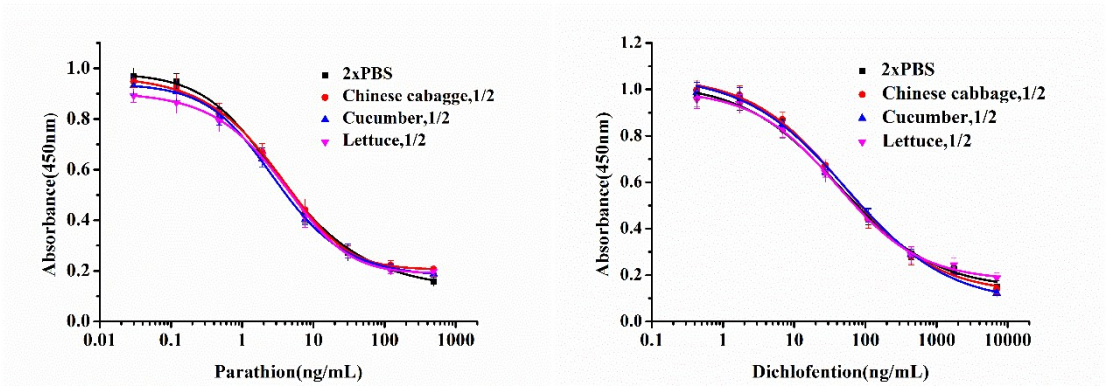


A



B

Fig.S1 Stability of scFab fragments. Protein extracts of scFab (6.34 mg/mL), its homologous scFv (6.36 mg/mL) and concentrated four times Fab (6.47 mg/mL) were incubated for 9 days at 37 °C. Concentrated of Fab was due to consistent reactivity against coating antigen of recombinant proteins. The reactivity against coating antigen and sensitivity of scFab, scFv and Fab against parathion was analyzed by icELISA every day during incubating. For one antibody, three samples were determined by icELISA. Maximum aborbance (Amax) value at 450 nm (A) and the 50% inhibition of binding (IC_{50}) values (B) of the incubated antibodies were detected.



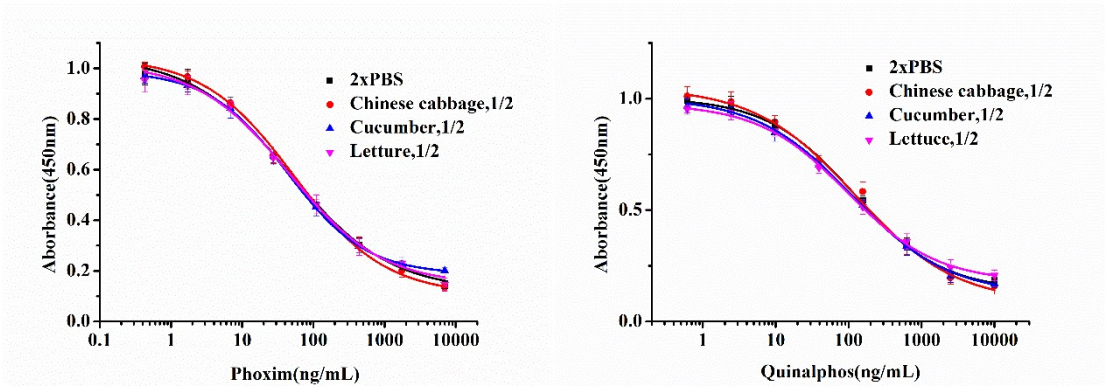


Fig.S2 Matrix effects on icELISA caused by three vegetable samples after QuEChERS treatments. 15 g of chopped Chinese cabbage, cucumber and lettuce extracted and purified following the QuEChERS protocol and the extracts were directly diluted with 2xPBS (20 mM, pH 7.4) .The diluted extracts were used to serially diluted parathion(A), dichlofenthion(B), phoxim(C), and quinalphos(D) standards for icELISA. For one concentration, three samples were determined by icELISA. The interference of the OP matrix in the standard curve became insignificant after all the extracts were diluted1:2.