

# Supplementary information

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## 3 **Biochips for Direct Detection and Identification of Bacteria in Blood Culture-** 4 **Like Conditions**

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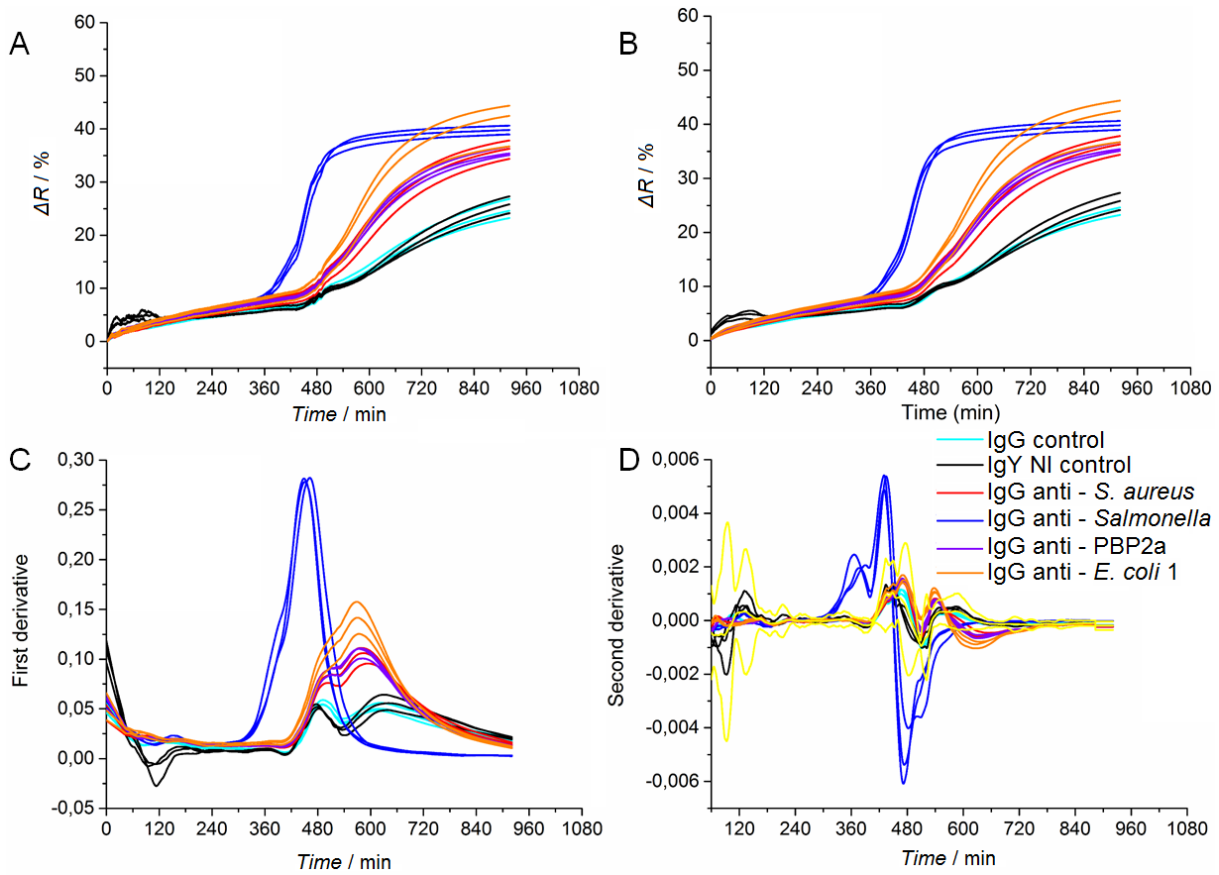
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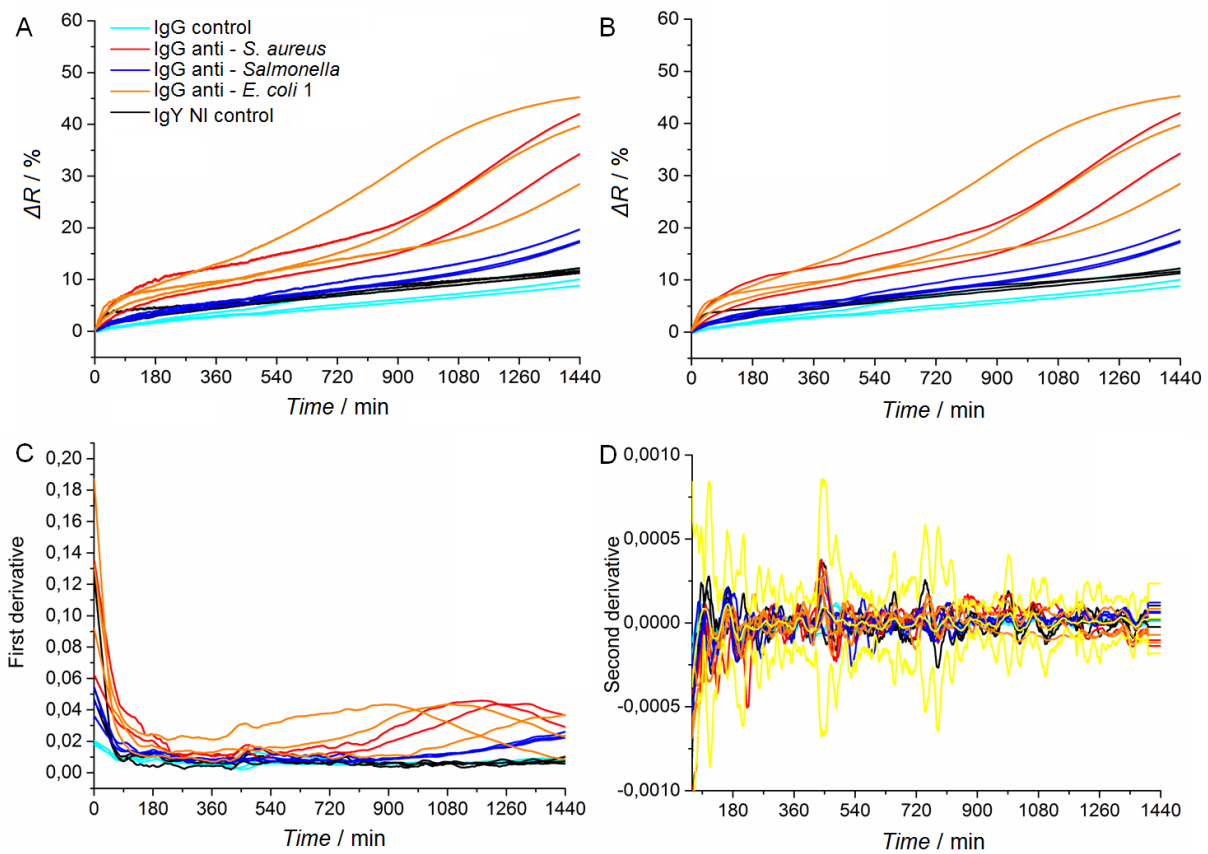
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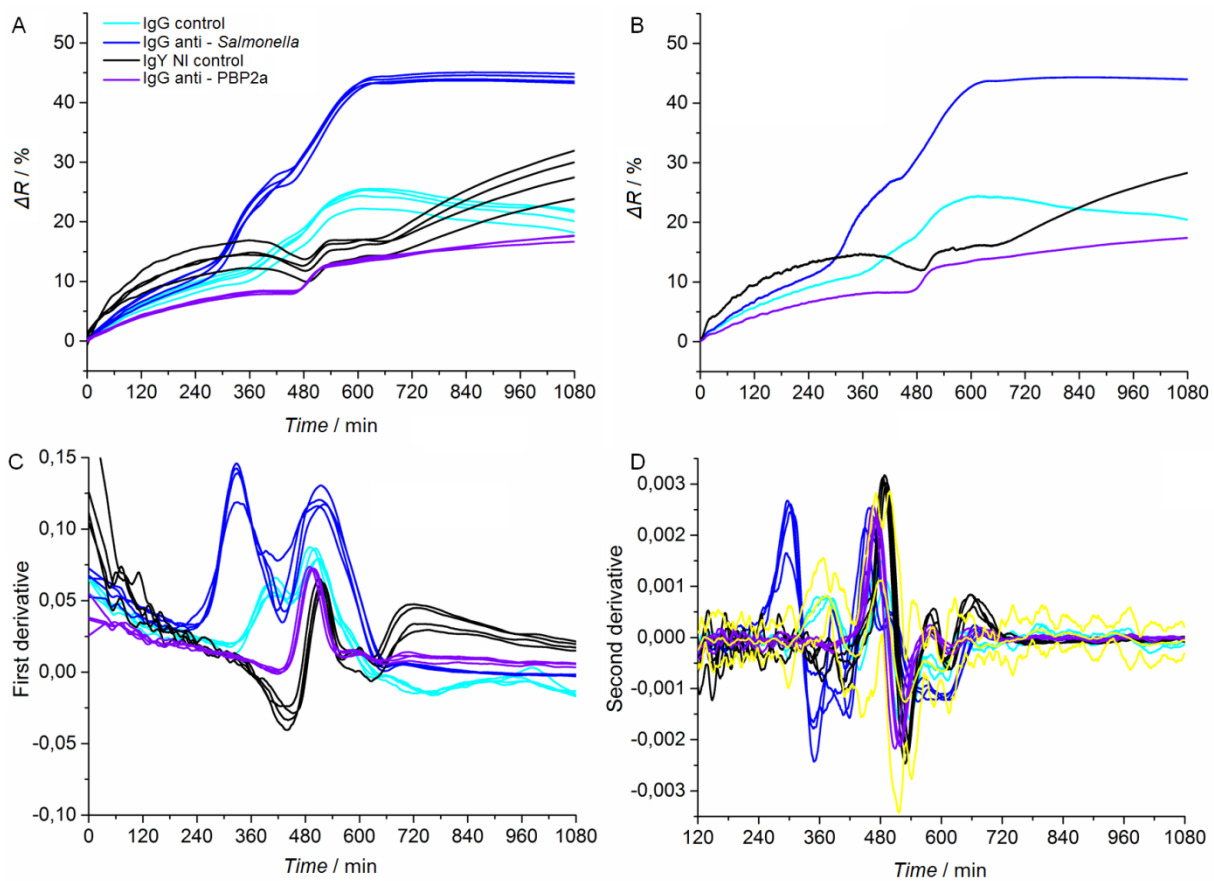
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20 **Figure S1:** SPRi data analysis for an initial bacterial load of  $124 \pm 16$  CFU.mL<sup>-1</sup> of *Salmonella*  
 21 Enteritidis in 1 mL culture media containing human blood (10:1 ratio). **A)** Raw SPRi data. **B)**  
 22 Smoothed SPRi data. **C)** First derivatives calculated from SPRi data. **D)** Second derivatives  
 23 caculated from SPRi data. Yellow curves represent the averaged signal of the control plus or minus  
 24 five standard deviations.



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26 **Figure S2:** SPRi data treatment for the sterile control in experimental conditions corresponding to  
 27 the Figure 2-D (culture medium and human blood in a 10:1 ratio). **A)** Raw SPRi data. **B)** Smoothed  
 28 SPRi data. **C)** First SPRi derivative. **D)** Second SPRi derivative. Yellow curves represent the  
 29 averaged SPR signal of the control plus or minus five standard deviations.



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31 **Figure S3:** SPRi data treatment for the detection of *Salmonella* Enteritidis in blood culture-like  
 32 conditions (*i.e.* 6 mL of blood diluted in 24 mL of culture medium, giving a 1:5 blood-to-broth ratio  
 33 and a final volume of 30 mL). The initial bacterial load is  $43 \pm 3$  CFU.mL<sup>-1</sup> representing  
 34 approximately 260 bacteria per blood milliliter. **A)** Smoothed SPRi signals. **B)** Averaged SPRi data  
 35 for the triplicates. **C)** First SPRi derivatives. **D)** Second SPRi derivatives. Yellow curves represent  
 36 the averaged SPRi signal of the control plus or minus five standard deviations.