

Supplementary material

Improved electrochemical detection of transthyretin synthetic peptide in the nanomolar range with a two-electrode system integrated in a glass/PDMS microchip

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The LOD was performed in the microfluidic chip by keeping the NDA / PN and NDA / KCN ratios constants. The experiment was repeated three times for each peptide concentration. For each detection step, the channel was washing with bidistilled water and a blank experiment with only the Fe(III) / Fe(II) redox couple was performed in order to check the measurement reproducibility. The values of the tested sample concentrations are shown in Table S1 below. For low PN concentrations, the amount of Fe(III) / Fe(II) was reduced to better observe the peak of the CBI- PN. This allowed a decrease on the ferrocyanide peak intensity with respect to the labelled peptide.

Table S1. Concentration values for various prepared samples.

[PN] (μ M)	[NDA] (mM)	[Fe(III)] / [Fe(II)] (mM)
1	0.1	0.125/0.25
0.5	0.05	0.125/0.25
0.25	0.025	0.125/0.25
0.1	0.01	0.025/0.05
0.05	0.005	0.025/0.05
0.025	0.0025	0.025/0.05