Electronic Supplementary Information to

A Novel Biosensor Array with a Wheel-like Pattern for Glucose, Lactate and Choline Detection Based on Electrochemiluminescence Imaging

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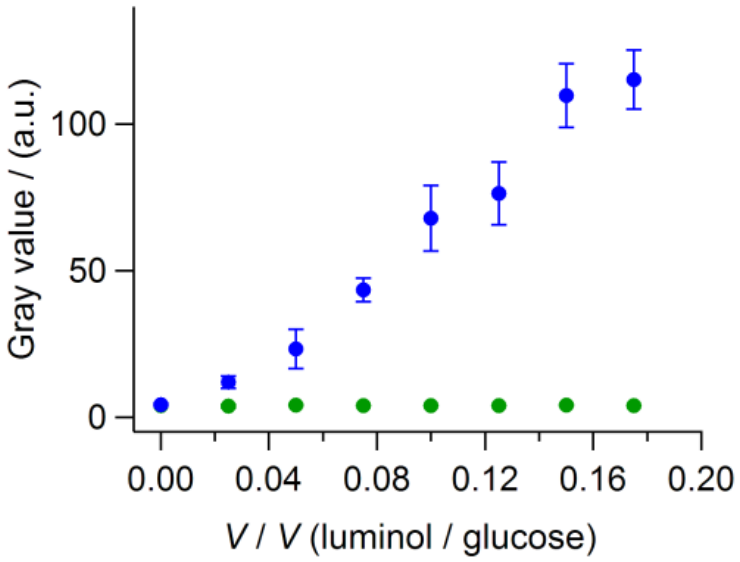

Fig. S-1 The effect of volume ratio of luminol versus glucose on gray value of ECL (blue) and CL (green) images in 0.1 M PBS (pH 7.4). The concentrations of luminol and glucose solutions are 10 mM and 1 mM, respectively.

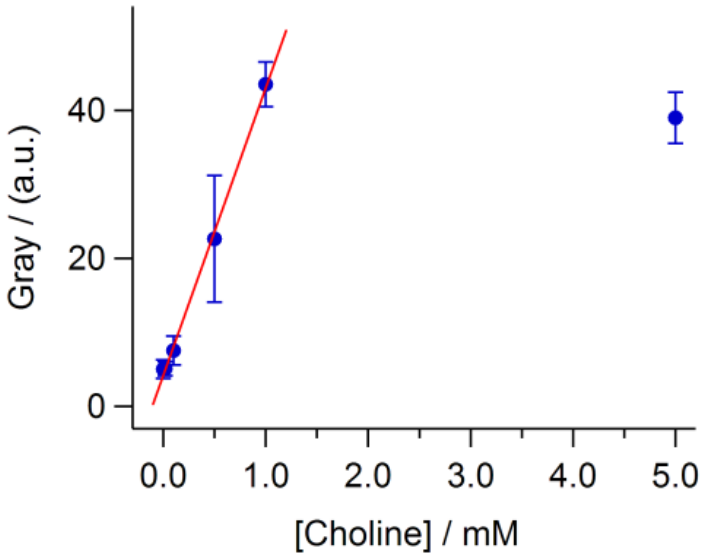

Fig. S-2 Calibration curve for choline detection using the ECL biosensor array. The solution was 0.1 M PBS (pH 7.4) containing 1.3 mM luminol.

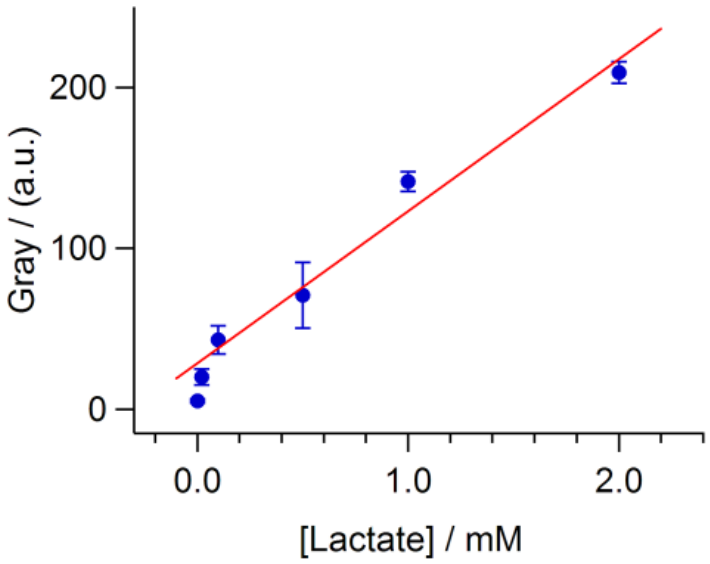

Fig. S-3 Calibration curve for lactate detection using the ECL biosensor array. The solution was 0.1 M PBS (pH 7.4) containing 1.3 mM luminol.

Table S-1 Analytical performance of the biosensor array to three kinds of biological compounds

Analyte	Regression equation (R)	Linear range (mM)	LOD (mM)
choline chloride	$G = 4.2313 + 38.74\ c$ (mM) ($R = 0.9990$)	0.10 – 1	0.097
glucose	$G = 0.8035 + 105.76\ c$ (mM) ($R = 0.9944$)	0.02 – 2	0.014
lactate	$G = 28.539 + 94.58\ c$ (mM) ($R = 0.9882$)	0.04 – 2	0.040