

Additional File

Label-free and washing-free alkaline phosphatase assay using a personal glucose meter

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Table S1. Summary of the previously reported ALP assay methods.

Key elements	Detection method	Detection limit	Sample	Reference
β -cyclodextrin-modified quantum dots	Fluorescence	10 U/L	-	[1]
dsDNA-templated copper nanoparticles	Fluorescence	0.3 U/L	Diluted serum	[2]
Gold nanoparticles	Colorimetry	1000 U/L	Serum	[3]
Peroxidase activity of copper ions	Fluorescence and colorimetry	4.3 pM	Diluted serum	[4]
Carbon quantum dots	Fluorescence	1.4 U/L	-	[5]
Molybdophosphate	Electrochemistry	0.5 U/L	-	[6]
Graphitic carbon nitride nanosheet	Fluorescence	0.08 U/L	Diluted serum	[7]
Microfluidic paper-based analytical device (μ PAD)	Flow length measurement	75 U/L	Diluted serum	[8]
Lab-on-a-chip (LOC)	Fluorescence	0.1 U/L	Serum	[9]
Personal glucose meter (PGM)	Electrochemistry	8.9 U/L (7.4 pM)	Blood	This work

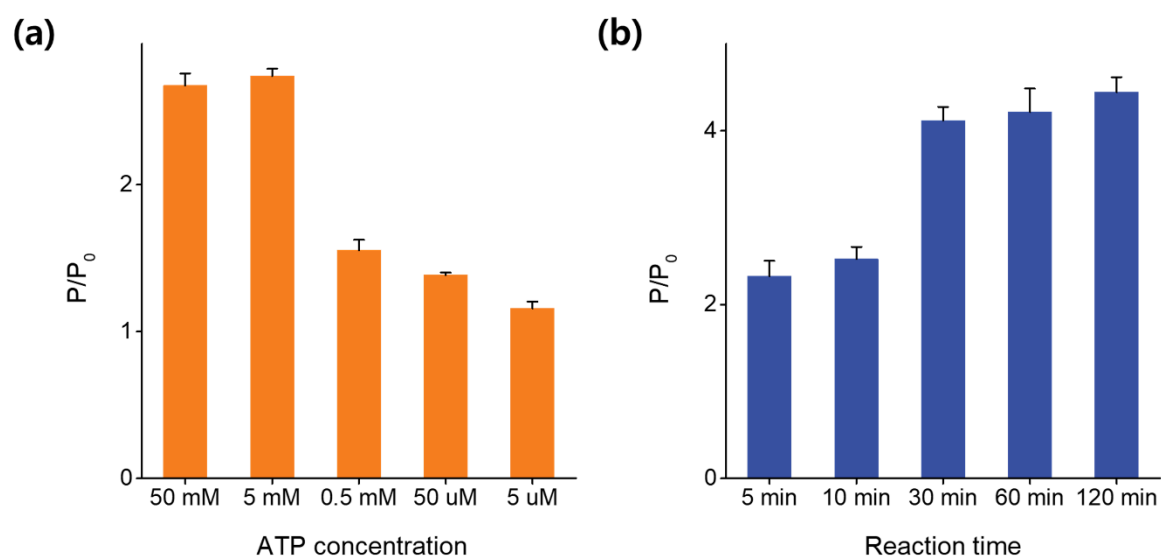


Figure S1. Optimization of (a) ATP concentration and (b) ALP reaction time. P_0 and P are defined as PGM signals in the absence and presence of ALP (200 U/L), respectively.

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