

# CRISPR-Cas-mediated Multianalyte Synthetic Urine Biomarker Test for Portable Diagnostics

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## Materials

Name	Company	Catalog Number	Comments
10x NEB Buffer 2.1	New England Biolabs	B6002SVIAL	
20-mer phosphorothioated DNA reporters with 3'-DBCO group	IDT		Custom DNA
Agilent 1100 High Performance Liquid Chromatography system with Vydac 214TP510 C4 column	Agilent		HPLC
ÄKTA fast protein liquid chromatography (FPLC)	GE Healthcare		FPLC
Amicon ultracentrifuge tubes (MWCO = 10 kDa)	EMD millipore		Various volumes available
Azide-terminated PAPs with C-terminus cysteine	CPC Scientific		Custom peptide
crRNAs	IDT		See Supplementary Table 1
Cryogenic transmission electron microscopy	JEM-2100F	JEOL	cyroTEM
Cysteine terminated DNA-peptide conjugates	CPC Scientific		Custom peptide
Dynamic light scattering (DLS)			DLS
EnGen <i>LbaCas12a</i> (Cpf1), 100 µM	New England Biolabs	M0653T	
Experimental animals	Taconic Biosciences	BALB/cAnNTac	6–8 weeks of age
gentleMACS C tubes	Miltenyi Biotec	130-093-237	tissue homogenization
HybriDetect Universal Lateral Flow Assay Kit	Miltenyi Biotec	MGHD 1	
Matrix-assisted laser desorption/ionization–time of flight (MALDI–TOF) mass spectrometry	Bruker		Microflex MALDI–TOF

MC26-Fluc cell line			Kenneth K. Tanabe Laboratory, Massachusetts General Hospital
multivalent PEG (40 kDA, 8-arm) with maleimide-reactive group	JenKem	A10020-1 / 8ARM(TP)-MAL-40K, 1 g	
Python, Version 3.9			<a href="https://www.python.org/">https://www.python.org/</a>
Quant-iT OliGreen ssDNA Assay Kit and Quant-iT OliGreen ssDNA Reagent	Invitrogen	O11492	ssDNA assay kit
ssDNA FAM-T10-Quencher and FAM-T10-Biotin reporter substrates	IDT		Custom DNA
Superdex 200 Increase 10/300 GL column	GE Healthcare	GE28-9909-44	For FPLC
Tecan Infinite Pro M200 plate reader	Tecan		
ThermoFisher Pierce BCA Protein Assay Kit	ThermoFisher Scientific	23225	