

Materials List for:

Experimental Protocol for Detecting *Cyanobacteria* in Liquid and Solid Samples with an Antibody Microarray Chip

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Materials

Name	Company	Catalog Number	Comments
0.22 mm pore diameter filters	Millipore	GSWP04700	For preparation of immunogens
Eppendorf 5424R microcentrifuge	Fisher Scientific		For preparation of immunogens
Phosphate buffer saline (PBS) pH 7.4 (10x)	Thermo Fisher Scientific	70011036	50 mM potassium phosphate, 150 mM NaCl, pH 7.4
Ultrasonic processor UP50H	Hielscher		For preparation of immunogens
Complete Freund's adjuvant	Sigma-Aldrich	F5881	Immunopotentiator
Incomplete Freud's adjuvant	Sigma-Aldrich	F5506	For boost injections
Protein A antibody purification kit	Sigma-Aldrich	PURE1A	For isolation of IgG
Centrifugal filter devices MWCO<100 kDa	Millipore	UFC510096-96K	For isolation of IgG
Dialysis tubings, benzoylated	Sigma-Aldrich	D7884-10FT	For isolation of IgG
Illustra Microspin G-50 columns	GE-HealthCare	GE27-5330-02	For isolation of IgG
Bradford reagent	Sigma-Aldrich	B6916-500 mL	To quantify the antibody concentration
MicroBCA protein assay kit	Thermo Scientific	23235	To quantify the antibody concentration
Protein arraying buffer 2x	Whatman (Sigma Aldrich)	S00537	Printing buffer; 30 - 40% glycerol in 1x PBS with 0.01% Tween 20
Tween 20	Sigma-Aldrich	P9416	Non-ionic detergent
Bovine serum albumin (BSA)	Sigma-Aldrich	A9418	Control for printing; blocking reagent
384-wells microplate	Genetix	X6004	For antibody printing
Robot arrayer for multiple slides	MicroGrid II TAS arrayer from Digilab		For antibody printing
Epoxy substrate glass slides	Arrayit corporation	VEPO25C	Solid support for antibody printing
Alexa Fluor-647 Succinimidyl-ester	Molecular probes	A20006	Fluorochrome
DMSO	Sigma-Aldrich	D8418	Fluorochrome dissolvent
Heidolph Titramax vibrating platform shaker	Fisher Scientific		For antibody labeling
Illustra Microspin G-50 columns	Healthcare	27-5330-01	For purification of labeled antibodies
Safe seal brown 0.5 mL tubes	Sarstedt	72,704,001	For labeled antibodies storage
Nanodrop 1000 spectrophotometer	Thermo Scientific		To quantify antibody concentration and labeling efficiency
3 µm pore size polycarbonate 47 mm diameter filter	Millipore	TMTP04700	To concentrate cells

1 M Trizma hydrochloride solution pH 8	Sigma-Aldrich	T3038	For TBSTRR preparation; to block slides
Sodium chloride	Sigma-Aldrich	S7653	For TBSTRR preparation
20 µm nylon filters	Millipore	NY2004700	For environmental extract preparation
10 - 12 mm filter holders	Millipore	SX0001300	For environmental extract preparation
Protease inhibitor cocktail	Sigma-Aldrich	P8340	For environmental extract storage
1 M Trizma hydrochloride solution pH 9	Sigma-Aldrich	T2819	To block slides
Heidolph Duomax 1030 rocking platform shaker	VWR		To block slides; for incubation processes
VWR Galaxy miniarray microcentrifuge	VWR	C1403-VWR	To dry slides
Multi-Well microarray hybridization cassette	Arrayit corporation	AHC1X24	Cassette for 24 assays per slide
GenePix 4100A microarray scanner	Molecular Devices		Scanner for fluorescence
GenePix Pro Software	Molecular Devices		Software for image analysis and quantification