

Materials List for:

Semi-automated Biopanning of Bacterial Display Libraries for Peptide Affinity Reagent Discovery and Analysis of Resulting Isolates

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Materials

Name	Company	Catalog Number	Comments
autoMACS Pro Separator	Miltenyi Biotec	130-092-545	Automated cell separator for use with magnetic beads
Luria Broth, Miller (LB)	Fisher Scientific	BP1426-500	Growth medium
Chloramphenicol	Fisher BioReagents	BP904-100	Antibiotic
Agar	Fisher Scientific	BP2641-500	Thickening/gelling agent
eCPX 3.0 Bacterial Display Peptide Library	Cytomx Therapeutics	N/A; http://cytomx.com/contact/	On-cell peptide display library. Provided by collaborators at USCB.
L-arabinose	Sigma	A3256-500G	Sugar, for induction of protein expression
Phosphate Buffered Saline pH 7.4 (PBS)	Amresco	0780-10L	Buffer
EZ-Link Sulfo-NHS-LC-Biotin, No-Weigh	Thermo Scientific	PI21327	Adds biotin molecule to primary amines
Pierce Biotin Quantitation Kit	Thermo Scientific	PI28005	Ensures biotin molecule is covalently bound to protein
Dynabeads MyOne Streptavidin T1 Beads	Invitrogen	65601	Magnetic beads for capture of biotin-conjugated proteins
Bovine Serum Albumin (BSA)	Sigma	A9647-100G	Protein, used as blocking agent for non-specific binding
D-glucose	Sigma	G8270-1KG	Sugar, for growth and impeding inducible protein expression
Ypet Mona	UCSB and ARL	N/A	Positive control for monitoring expression of eCPX 3.0. Produced by authors and collaborators; see references 12 and 13.
Dylight 488 NHS Ester	Thermo Scientific	46403	For conjugating protein target to fluorophore
Streptavidin, R-Phycoerythrin conjugate (SAPE)	Thermo Scientific	S866	Negative control for monitoring non-specific binding to streptavidin
BD FACSDiablo	Becton, Dickinson, and Company	342003	Buffer for running FACS instrument
autoMACS Columns	Miltenyi Biotec	130-021-101	For MACS Separation
autoMACS Running Buffer – MACS Separation Buffer	Miltenyi Biotec	130-091-221	For autoMACS instrument maintenance. Hazard: contains 0.09% azide.
autoMACS Pro Washing Solution	Miltenyi Biotec	130-092-987	For autoMACS instrument maintenance
70% Ethanol	VWR	E505-4L	Decontamination of autoMACS
Glycerol	Sigma	G6279-1L	For bacterial freezer stocks
Chill 15 rack	Miltenyi Biotec	130-092-952	For MACS Separation

BD FACSCanto II	Becton, Dickinson, and Company	744810; http://wwwbdbiosciences.com/us/instruments/research/cell-analyzers/bd-facscanto-ii/m/744810/overview	For assessment of peptide binding to target
BD FACSDiva Software	Becton, Dickinson, and Company	659523	For assessment of peptide binding to target
Dynabeads MPC-S magnetic particle concentrator	Thermo Scientific	A13346	Bench top cell separator for use with magnetic beads
Colony Sequencing	Genewiz	N/A; https://www.genewiz.com/	DNA and Colony Sequencing Services
Excel	Microsoft	323021400; https://www.microsoftstore.com/store/msusa/en_US/pdp/Excel-2016/productID.323021400	For use with sequence analysis macro
Anthrax Protective Antigen (PA)	List Biological Laboratories, Inc.	171	Target protein used as example for representative results.
Abrax	ECBC and ARL	N/A	Target protein used as example for representative results. Produced by authors and collaborators; see references 1 and 15.
Rivax	ECBC and ARL	N/A	Target protein used as example for representative results. Produced by authors and collaborators; see references 1 and 15.