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5.36 Biochemistry Laboratory  
Spring 2009

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## Equipment and Supplies for 5.36 Biochemistry Modules

Spring 2009

EQUIPMENT / NON-DISPOSABLES	
	ORDERING INFORMATION
UV/Vis spectrophotometer	
100-uL quartz cuvettes	
benchtop microcentrifuges	size for 1.5 mL eppendorf tubes
vortexers	
PCR thermal cycler	
heated shaker (37 °C )	
shaker (room temperature)	
shaker holders (heated)	
37 °C incubator	
microwave	
DNA transilluminator	
camera/box for DNA gels	
stir plates (no heat)	
heat/stir plates	
pH meters	
1L Flasks	
ice buckets	
42 °C benchtop water bath	
1-L bottles for buffers	
200-mL Erlenmeyer flasks	
Timers	
SDS-PAGE Gel Boxes	
DNA gel boxes (large)	Invitrogen # EI0001, \$397
Combs for DNA gels	Bio-Rad, 14-well size
Pipetman 1 or 2 uL	
Pipetman 10uL, 20 uL, 200 uL, and 1 mL	
Pipetaids	
Stir plates	
Centrifuge Tubes (500 mL)	
centrifuges/rotors	
centrifuge adaptors	JA-10 Beckman for 500-mL tubes to adapt from 500 mL size for 50-mL tubes
Gel staining boxes	
Tube racks eppendorf	
2-4L beakers	
Spatula - BIG	
Spatula - Medium	
Refrigerator with -20 freezer	
Balances	

ice scoop	
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**PROTEIN EXPRESSION/QUANTIFICATION SUPPLIES**

	<b>ORDERING INFORMATION</b>
LB powder	1 kg, USBweb # 75852
Bacto-agar	
Kanamycin sulfate	25 g, Invitrogen #11815-032
Streptomycin sulfate	100 g, Invitrogen # 11860-38
IPTG	10 g, VWR # 80056-920
Cell culture tubes, 14 mL	Falcon #352059 from BD bioscience or VWR
Chlorax bleach	VWR # 37001-060
0.2 micron syringe filters	
Bio-Rad assay dye reagent	450 mL bottle, catalog # 500-0006
BSA (bovine serum albumin)	VWR
Disposable cuvettes, 5 mL	Bio-Rad catalog # 223-9950 (polystyrene)
Autoclave indicator tape	VWR

**PROTEIN PURIFICATION/DIALYSIS/CONCENTRATION SUPPLIES**

	<b>ORDERING INFORMATION</b>
Ni-NTA resin	Novagen # 70666-4 or -5
10-ml disposable columns	Biorad # 731-1550 (10 mL capacity)
20-mL disposable columns	Biorad #732-1010
NaCl	12 kg, VWR # VW6430-7
Imidazole	500 g, USBweb #17525
Tris base	
HCl	
B-PER	Pierce #78248
Protease inhibitor cocktail	Calbiochem #539137
10K dialysis cassettes small	Pierce # 66380 (Slide-a-Lyzer 0.5-3 mL sample vol)
10K dialysis cassettes large	Pierce # (Slide-a-Lyzer 3-12 mL sample vol)
Slide-a-Lyzer buoys	Pierce #66430 (20-pack)
Centrifugal concentrators	Millipore Amicon Ultra 10 K: #UFC901024

**COUPLED PHOSPHORYLATION ASSAY MATERIALS**

	<b>ORDERING INFORMATION</b>
NADH	Sigma #N8129, 100 mg, \$24.57
ATP disodium salt	Sigma #A7699, 1G, \$58.40
PEP (Phosphoenolpyruvate)	Aldrich #P0564, 100 mg, \$29.50
PK/LDH solution	Sigma #P0294, 5 mL, \$80.50
Peptide: Ac-EAIYAAPFAKKK-NH <sub>2</sub>	Tufts Core Facility, 0.1 mmol scale, no HPLC, \$300
MgCl <sub>2</sub>	
DMSO	
Gleevec (aka Imatinib)	LC laboratories #1-5508
Dasatinib	LC laboratories #D3307-100M, \$215 for 100 mg

commercial Abl kinase	Calbiochem, cat #102555, \$224 for a 20 uL vial
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**DNA MINIPREP, DIGESTION, AND QUIKCHANGE SUPPLIES**

	<b>ORDERING INFORMATION</b>
Qiaprep spin miniprep kit	Qiagen # 27106 (for 250 preps, )
Xho1 restriction enzyme	Promega #R6161 for 300 µL
Nde1 restriction enzyme	Promega #R6801 for 50 µL
DNA ladder (500 bp)	Invitrogen # 10594-018 for 100 µL,
Thin-walled PCR tubes	
5X nucleic acid sample loading buffer- this will most likely be included with the DNA ladder (Invitrogen)	
Dpn1 enzyme	Promega #R6231, 200 units
dNTP mix (10 mM each)	VWR #95040-878, \$47.25 for 1 mL
PfuTurbo polymerase	Stratagene #600250, \$99 for 100 units
DH5a cells	VWR stockroom MI18265017
T7 promoter primer (5pmol/uL)	Novagen #69348-3, \$80 for 500 pmol
T7 terminator primer (5pmol/uL)	Novagen #69337-3, \$80 for 50 pmol
Cell culture plates	VWR stockroom or BD Bioscience #353003
Parafilm	
agarose	

**GEL SUPPLIES FOR DNA AND PROTEIN GELS**

	<b>ORDERING INFORMATION</b>
Plastic gel cassettes, 1.5 mm	Invitrogen # NC2015 (25 pieces)
Gel combs, 10 well, 1.5 mm	Invitrogen # NC3510 (pack of 25)
Gel-loading pipette tips	Sorenson Bioscience #13790
Acrylamide	VWR # EM-AX0330-2
Sodium lauryl sulfate (SDS)	USBweb # 18220 (1 kg)
TEMED	VWR # AAA12536-AE (100 mL)
Glycine	
Sucrose	
Ammonium persulfate (APS)	VWR
Dithiothreitol (DTT)	VWR
Bromophenol blue	

**GENERAL SUPPLIES**

	<b>ORDERING INFORMATION</b>
Pipette tips	sterile or autoclavable for p10, 20, 200, and 1000
1.5 mL eppendorf tubes	
0.65 mL eppendorf tubes	
15-mL conical tubes	VWR stockroom
50-mL conical tubes	VWR stockroom
Ethanol	
Glycerol	
pH strips	VWR stockroom

isopropanol	
saran wrap	VWR stockroom
tinfoil	VWR stockroom
plastic syringes/needles	VWR stockroom (3 mL and 10 mL size)
colored tape	VWR stockroom
large stir bars	lab supply closet (or VWR)

<b>DNA</b>	
	<b>STORAGE LOCATION</b>
Yop DNA construct	-20 freezer
"wt" Abl DNA construct (in a pET-28a vect	-20 freezer
H396P Abl DNA construct	-20 freezer