

Experiment	Figure 2C-F, I,L Figure 3 Figure 4	Figure 1B,C,E Figure 2G,H Supplemental Figure 1-3	Figure 1D Figure 2A-B Supplemental Figure 4	Figure 5B-F	Figure 6 Supplemental Figure 5
aMEM (Alpha Modification of Eagle's Media) + Non-Essential Amino Acids Solution	USBiological Life Sciences M3852-02 + Gibco 11140050	Corning 15-012-CV + Gibco 11140050	Corning 15-012-CV + Gibco 11140050	Corning 15-012-CV + Gibco 11140050	Corning 15-012-CV + Gibco 11140050
Inorganic Salts					
	<i>Units</i>	mg/L	mg/L	mg/L	mg/L
CaCl2 (anhydrous)	265.00	200.00	200.00	200.00	200.00
KCl	400.00	400.00	400.00	400.00	400.00
MgSO4 (anhydrous)	97.67	97.70	97.70	97.70	97.70
NaCl	6800.00	6800.00	6800.00	6800.00	6800.00
NaH2PO4 • H2O	122.00	140.00	140.00	140.00	140.00
NaHCO3	2200 (supplemented in, does not come with product originally)	2200.00	2200.00	2200.00	2200.00
Amino Acids					
	<i>Units</i>	mg/L	mg/L	mg/L	mg/L
L-Alanine	33.90	33.90	33.90	33.90	33.90
L-Arginine • HCl	126.00	126.40	126.40	126.40	126.40
L-Asparagine • H2O	63.20	63.20	63.20	63.20	63.20
L-Aspartic acid	43.30	43.30	43.30	43.30	43.30
L-Cysteine • HCl • H2O	100.00	100.00	100.00	100.00	100.00
L-Cystine • 2HCl	31.30	31.20	31.20	31.20	31.20
L-Glutamic acid	89.70	89.70	89.70	89.70	89.70
L-Glutamine	292.00	--	--	--	--
L-Alanyl-L-Glutamine (GlutaMAX)	--	445.00	445.00	--	445.00
Glycine	57.50	57.50	57.50	57.50	57.50
L-Histidine • HCl • H2O	42.00	41.90	41.90	41.90	41.90
L-Isoleucine	52.00	52.50	52.50	52.50	52.50
L-Leucine	52.00	52.50	52.50	52.50	52.50
L-Lysine • HCl	72.50	72.50	72.50	72.50	72.50
L-Methionine	15.00	15.00	15.00	15.00	15.00
L-Phenylalanine	32.00	32.50	32.50	32.50	32.50
L-Proline	51.50	51.50	51.50	51.50	51.50
L-Serine	35.50	35.50	35.50	35.50	35.50
L-Threonine	48.00	47.60	47.60	47.60	47.60
L-Tryptophan	10.00	10.00	10.00	10.00	10.00
L-Tyrosine • 2Na	52.00	--	--	--	--
L-Tyrosine • 2Na • 2H2O	--	51.90	51.90	51.90	51.90
L-Valine	46.00	46.80	46.80	46.80	46.80
Vitamins					
	<i>Units</i>	mg/L	mg/L	mg/L	mg/L
Ascorbic acid	50.00	50.00	50.00	50.00	50.00
Biotin	0.10	0.10	0.10	0.10	0.10
D-Calcium pantothenate	1.00	1.00	1.00	1.00	1.00
Choline chloride	1.00	1.00	1.00	1.00	1.00
Folic acid	2.00	1.00	1.00	1.00	1.00
l-Inositol	1.00	2.00	2.00	2.00	2.00
Nicotinamide	1.00	1.00	1.00	1.00	1.00
Pyridoxine • HCl	1.00	1.00	1.00	1.00	1.00
Rbflavin	0.10	0.10	0.10	0.10	0.10
Thiamine • HCl	1.00	1.00	1.00	1.00	1.00
Vitamin B12	1.36	1.36	1.36	1.36	1.36
Other					
	<i>Units</i>	mg/L	mg/L	mg/L	mg/L
Adenosine	--	--	--	--	--
Cytidine	--	--	--	--	--
2'-Deoxyadenosine • H2O	--	--	--	--	--
2'-Deoxycytidine • HCl	--	--	--	--	--
2'-Deoxyguanosine • H2O	--	--	--	--	--
D-Glucose	(see below for C13 glucose)	1000.00	1000.00	1000.00	1000.00
Guanosine	10.00	--	--	--	--
Lipoic Acid	0.20	0.20	0.20	0.20	0.20
Phenol Red	11.00	10.00	10.00	10.00	10.00
Sodium Pyruvate	110 (supplemented in, does not come with product originally)	110.00	110.00	110.00	110.00
Thymidine	--	--	--	--	--
Uridine	--	--	--	--	--
N1 Media Supplement					
	Sigma N6530	Sigma N6530	Sigma N6530	Sigma N6530	Sigma N6530
	<i>Units</i>	µg/mL	µg/mL	µg/mL	µg/mL
Recombinant human insulin	5.0000	5.0000	5.0000	5.0000	5.0000

Human transferrin (partially iron-saturated)	5.0000	5.0000	5.0000	5.0000	5.0000
Sodium selenite	0.0050	0.0050	0.0050	0.0050	0.0050
Putrescine	16.0000	16.0000	16.0000	16.0000	16.0000
Progesterone	0.0073	0.0073	0.0073	0.0073	0.0073
Additions To Culture Media					
	<i>Units</i>	mg/L	mg/L	mg/L	mg/L
U-13C-D-Glucose (CLM-1396)		1000	--	--	--
	<i>Units</i>	mg/L	mg/L	mg/L	mg/L
13C-5-Glutamine (CLM-1822)		--	--	300	--
	<i>Units</i>	U/mL	U/mL	U/mL	U/mL
Penicillin-Streptomycin (Gibco 15140-122)		100	100	100	100
	<i>Units</i>	mg/L	mg/L	mg/L	mg/L
Taurine (Sigma T8691)		250.00	250.00	250.00	250.00
	<i>Units</i>	µg/L	µg/L	µg/L	µg/L
Hydrocortisone-Cyclodextrin (Sigma H0396)		20	20	20	20
3,3',5-triiodo-L-thyronine sodium salt (Sigma T5516)		0.013	0.013	0.013	0.013
	<i>Concentration</i>	mM	mM	mM	mM
L-carnitine (Thermo A1761809)		0.4	--	--	--
BSA conjugated-Palmitate		0.15	--	0.15	0.3
BSA conjugated-Oleate		0.15	--	0.15	--
	<i>Percentage</i>	%	%	%	%
Fetal Bovine Serum (Bio-Techne S11550H)		0	5	0	0