

Materials List for

Rapid Quantification of Oxidized and Reduced Forms of Glutathione Using *Ortho*-phthalaldehyde in Cultured Mammalian Cells In Vitro

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Materials

Name	Company	Catalog Number	Comments
0.22µm filter (optional-For lysis buffer)	Fisher scientific	12561259	
100mL volumetric flask	Fisher scientific	15290866	
1L Volumetric flask	Fisher scientific	15230876	
250mL beaker (optional-For lysis buffer)	Fisher scientific	15409083	
8-Channel micropipette (20-200µL)	SLS	FA10011D2	
8-Channel micropipette (2-20µL)	SLS	B2B06492	
96 well plates - black with clear bottom, TC treated	Fisher scientific	10000631	Preferred plate for seeding and fluorescence, use TC treated clear if unavailable
96 well plates - clear (TC treated and untreated)	Fisher scientific	10141161	If black plates with clear bottom is not available/ suitable use TC treated clear
96 well plates - white, Not TC treated	Fisher scientific	11457009	
A549 (lung carcinoma) cell line	ATCC	CCL-185	
Absolute ethanol	Merck (Sigma-Aldrich)	1.08543	
Aluminium foil	Fisher scientific	11779408	For protecting plates from light
BCA Assay Kit	Thermo	23225	
Benchtop Centrifuge (with 96 plate rotor)	Eppendorf	5804	
Ethylenediaminetetraacetic acid (EDTA)	Merck (Sigma-Aldrich)	E9884	
Glutathione (GSH)	Merck (Sigma-Aldrich)	G6013	
Glutathione disulfide (GSSG)	Merck (Sigma-Aldrich)	G4501	
Glycerol	Merck (Sigma-Aldrich)	G5516	
HCl, 37%	Merck (Sigma-Aldrich)	258148	Dilute to 1mM for GSH stock, pH adjustment also
HepG2 (Hepatocarcinoma) cell line	ATCC	HB-8065	

IGEPAL CA-630	Merck (Sigma-Aldrich)	18896	Use either IGEPAL CA-630 or NP-40 for solution, not both
IP lysis buffer	Fisher scientific	11825135	
J774 (monocyte, macrophage) cell line	ATCC	TIB-67	
KCl	Merck (Sigma-Aldrich)	P3911	
KH ₂ PO ₄	Merck (Sigma-Aldrich)	P0662	
Micropipette (20-200µL)	SLS	B2B06482	
Micropipette (2-20µL)	SLS	B2B06478	
Microplate shaker	VWR	444-0041	
Na ₂ HPO ₄	Merck (Sigma-Aldrich)	S9763	
NaCl	Merck (Sigma-Aldrich)	S9888	
NaOH, 10M	Merck (Sigma-Aldrich)	72068	For pH adjustment only
N-Ethylmaleimide (NEM)	Merck (Sigma-Aldrich)	E3876	
NP-40	Merck (Sigma-Aldrich)	492016	Use either IGEPAL CA-630 or NP-40 for solution, not both. NP-40 alternative suggested
Ortho -Phthaldialdehyde (OPA)	Merck (Sigma-Aldrich)	P1378	
PBS 0.1M	Merck (Sigma-Aldrich)	P2272	PBS can either be acquired pre-made or made in house, see notes
Plate reader (with fluorescence capacity)	Tecan	SPARK	
Stir bar (optional-For lysis buffer)	Fisher scientific	16265731	
Toxilight bioassay kit (AK assay)	Lonza	LT17-217	
Tris(2-carboxyethyl)phosphine hydrochloride (TCEP) 0.5M in H ₂ O	Alfa Aesar	H51864	Can also be purchased crystallised and suspended
TRIS-HCl	Merck (Sigma-Aldrich)	93363	
X100 phosphatase and protease cocktail	Fisher scientific	10025743	