

Materials List for

Purification of Endogenous *Drosophila* Transient Receptor Potential Channels

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Materials

Name	Company	Catalog Number	Comments
Bacterial strains			
<i>BL21(DE3) Competent Cells</i>	Novagen	69450	Protein overexpression
Experiment models			
D.melanogaster: W ¹¹¹⁸ strain	Bloomington Drosophila Stock Center	BDSC:3605	<i>Drosophila</i> head preparation
Material			
20/30/40 mesh stainless steel sieves	Jiufeng metal mesh company	GB/T6003.1	<i>Drosophila</i> head preparation
30% Acrylamide-N,N'-Methylenebisacrylamide(29:1)	Lablead	A3291	SDS-PAGE gel preparation
Ammonium Persulfate	Invitrogen	HC2005	SDS-PAGE gel preparation
Cocktail protease inhibitor	Roche	05892953001	Protease inhibitor
Coomassie brilliant blue R-250	Sangon Biotech	A100472-0025	SDS-PAGE gel staining
DL-Dithiothreitol (DTT)	Sangon Biotech	A620058-0100	Size-exclusion column buffer preparation
Ethylenediaminetetraacetic acid disodium salt (EDTA)	Sangon Biotech	A500838-0500	Size-exclusion column buffer preparation
Glycine	Sangon Biotech	A610235-0005	SDS-PAGE buffer preparation
Glutathione Sepharose 4 Fast Flow beads	Cytiva	17513202	Affinity chromatography
Imidazole	Sangon Biotech	A500529-0001	Elution buffer preparation for Ni-column
Isopropyl-beta-D-thiogalactopyranoside (IPTG)	Sangon Biotech	A600168-0025	Induction of protein overexpression
LB Broth Powder	Sangon Biotech	A507002-0250	<i>E.coli.</i> cell culture
L-Glutathione reduced (GSH)	Sigma-aldrich	G4251-100G	Elution buffer preparation for Glutathione beads
Ni-Sepharose excel beads	Cytiva	17371202	Affinity chromatography
N-Dodecyl beta-D-maltoside (DDM)	Sangon Biotech	A610424-001	Detergent for protein purification

N,N,N',N'-Tetramethylethylenediamine (TEMED)	Sigma-aldrich	T9281-100ML	SDS-PAGE gel preparation
PBS	Sangon Biotech	E607008-0500	Homogenization buffer for <i>E.coli.</i> cell
PMSF	Lablead	P0754-25G	Protease inhibitor
Prestained protein marker	Thermo Scientific	26619/26616	Prestained protein ladder
Size exclusion column (preparation grade)	Cytiva	28989336	HiLoad 26/60 Superdex 200 PG column
Size exclusion column (analytical grade)	Cytiva	29091596	Superose 6 Increase 10/300 GL column
Sodium chloride	Sangon Biotech	A501218-0001	Protein purification buffer preparation
Sodium dodecyl sulfate (SDS)	Sangon Biotech	A500228-0001	SDS-PAGE gel/buffer preparation
Tris base	Sigma-aldrich	T1503-10KG	Protein purification buffer preparation
Ultrafiltration spin column	Millipore	UFC901096/801096	Protein concentration
Equipment			
Analytical Balance	DENVER	APX-60	Metage of <i>Drosophila</i> head
Desk-top high-speed refrigerated centrifuge for 15mL and 50mL conical centrifugation tubes	Eppendorf	5810R	Protein concentration
Desk-top high-speed refrigerated centrifuge 1.5mL centrifugation tubes	Eppendorf	5417R	Centrifugation of <i>Drosophila</i> head lysate after homogenization
Empty gravity flow column (Inner Diameter=1.0cm)	Bio-Rad	738-0015	TRP protein purification
Empty gravity flow column (Inner Diameter=2.5cm)	Bio-Rad	738-0017	Bait and competitor protein purification from <i>E.coli.</i>
Gel Documentation System	Bio-Rad	Universal Hood II Gel Doc XR System	SDS-PAGE imaging
High-speed refrigerated centrifuge	Beckman coulter	Avanti J-26 XP	Centrifugation of <i>E.coli.</i> cells/cell lysate
High pressure homogenizer	UNION-BIOTECH	UH-05	Homogenization of <i>E.coli.</i> cells
Liquid nitrogen tank	Taylor-Wharton	CX-100	<i>Drosophila</i> head preparation
Protein purification system	Cytiva	AKTA purifier	Protein purification
Refrigerator (-80°C)	Thermo	900GP	<i>Drosophila</i> head preparation
Spectrophotometer	MAPADA	UV-1200	OD600 measurement of <i>E.coli.</i> cells
Spectrophotometer	Thermo Scientific	NanoDrop 2000c	Determination of protein concentration
Ultracentrifuge	Beckman coulter	Optima XPN-100 Ultracentrifuge	Ultracentrifugation