

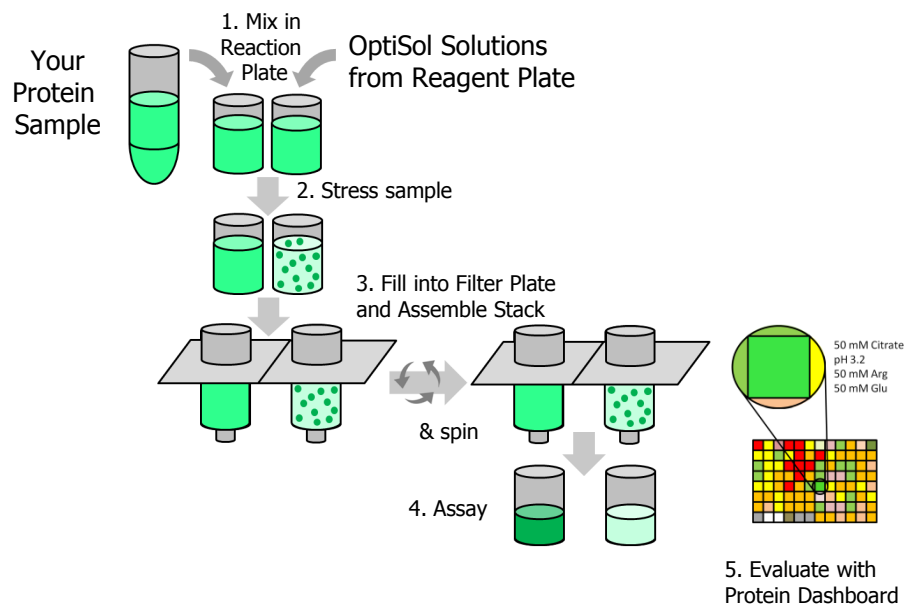
Protocol A: Protein Solubility Profiling

Goal: identify conditions that keep protein solubilized

Material: non-aggregated protein sample (100 µL – 2 mL)

Protocol:

1. Mix aliquots of protein sample with solutions from Reagent Plate in Reaction Plate (i.e. 96 x 20 µL protein + 150 µL OptiSol reagent). We recommend to obtain the reference reading of OptiSol Reagents (without protein) for more accurate results.
2. Apply aggregation stress (i.e. heat to 37°C; incubate over night or 2 weeks; 20 x freeze/thaw cycles; shear through narrow-bore needle;...).
3. Fill into Filter Plate and assemble Stack (Filter Plate on top, Collection Plate on bottom) and spin 30 min @ 3,000 rpm.
4. Assess protein content/function in filtrate. Evaluate data with Protein Dashboard and identify best solution. Consult the Manual for details. (www.solublebioscience.com).



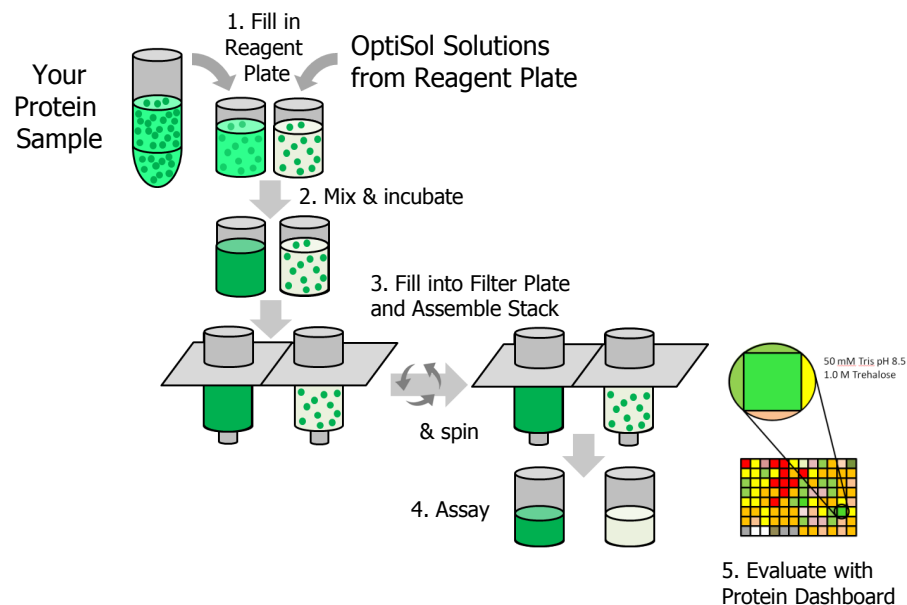
Protocol B: Solubilize Aggregated Protein

Goal: identify conditions that solubilize an aggregated protein sample

Material: aggregated protein sample (100 µL – 2 mL)

Protocol:

1. Fill aliquots of aggregated protein sample into Reaction Plate (i.e. 96 x 20 µL protein + 150 µL OptiSol reagent). We recommend to obtain the reference reading of OptiSol Reagents (without protein) for more accurate results.
1. Mix and incubate for more than 10 min.
2. Fill into Filter Plate and assemble Stack (Filter Plate on top, Collection Plate on bottom) and spin 30 min @ 3,000 rpm.
3. Assess protein content/function in filtrate. Evaluate data with Protein Dashboard and identify best solution. Consult the Manual for details. (www.solublebioscience.com).



OptiSol™

Protein
Solubility
Screening Kit

Product Information

Content:

- 1 x 96 well OptiReagent Plate
- 1 x 96 well Filter Plate
- 1 x 96 well Collection Plate
- Quick Start Guide and MSDS

Purpose

OptiSol Protein Solubility Screening Kit

Systematic solution design and array-based filtration technology for:

- **Protein Solubility Profiling**
or
- **Solubilizing of Aggregated Protein Sample**

For updated instructions and additional information please refer to www.solublebioscience.com

Order Information

OptiSol Kit I	cat. #SOL-102-001	\$269.00 USD
OptiSol Kit II	cat. #SOL-102-002	\$269.00 USD
OptiSol Kit III	cat. #SOL-102-003	\$269.00 USD
OptiSol Kit IV	cat. #SOL-102-004	\$269.00 USD

*Kits can be purchased in 3 pack at discount for \$749.00 USD

SolubleBioScience, Inc.
1500 First Ave N
Birmingham
AL 35203, USA

www.solublebioscience.com
info@solublebioscience.com
Phone: 205-206-4600



Reagent Listing

Well #	Row Col	Buffer#			Additive		Well #	Row Col	Buffer#			Additive	
		Conc unit	pH		NAME	Conc unit			Conc unit	pH	NAME	Conc unit	
1	A 1	Glycine	100 mM	3.0			49	E 1	Glycine	50 mM	3.0	Na ₂ SO ₄	500 mM
2	A 2	Citric Acid	100 mM	3.2			50	E 2	Sodium Acetate	50 mM	4.5	Na ₂ SO ₄	500 mM
3	A 3	PIPPS	100 mM	3.7			51	E 3	Bis-Tris	50 mM	6.0	Na ₂ SO ₄	500 mM
4	A 4	Citric Acid	100 mM	4.0			52	E 4	MOPS	50 mM	7.0	Na ₂ SO ₄	500 mM
5	A 5	Sodium Acetate	100 mM	4.5			53	E 5	Imidazole	50 mM	8.0	Na ₂ SO ₄	500 mM
6	A 6	Na/K Phosphate	100 mM	5.0			54	E 6	CHES	50 mM	9.5	Na ₂ SO ₄	500 mM
7	A 7	Sodium Citrate	100 mM	5.5			55	E 7	Citric Acid	50 mM	3.2	Arg/Glu*	50 mM
8	A 8	Na/K Phosphate	100 mM	6.0			56	E 8	Na/K Phosphate	50 mM	5.0	Arg/Glu*	50 mM
9	A 9	Bis-Tris	100 mM	6.0			57	E 9	ADA	50 mM	6.5	Arg/Glu*	50 mM
10	A 10	MES	100 mM	6.2			58	E 10	HEPES	50 mM	7.5	Arg/Glu*	50 mM
11	A 11	ADA	100 mM	6.5			59	E 11	Tris	50 mM	8.5	Arg/Glu*	50 mM
12	A 12	Bis-Tris Propane	100 mM	6.5			60	E 12	CAPS	50 mM	10.0	Arg/Glu*	50 mM
13	B 1	Ammonium Acetate	100 mM	7.0			61	F 1	Glycine	50 mM	3.0	Tween 20	1 % (w/v)
14	B 2	MOPS	100 mM	7.0			62	F 2	Sodium Acetate	50 mM	4.5	Tween 20	1 % (w/v)
15	B 3	Na/K Phosphate	100 mM	7.0			63	F 3	Bis-Tris	50 mM	6.0	Tween 20	1 % (w/v)
16	B 4	HEPES	100 mM	7.5			64	F 4	MOPS	50 mM	7.0	Tween 20	1 % (w/v)
17	B 5	Tris	100 mM	7.5			65	F 5	Imidazole	50 mM	8.0	Tween 20	1 % (w/v)
18	B 6	EPPS	100 mM	8.0			66	F 6	CHES	50 mM	9.5	Tween 20	1 % (w/v)
19	B 7	Imidazole	100 mM	8.0			67	F 7	Citric Acid	50 mM	3.2	Solubilisin II™	100 % (w/v)
20	B 8	Bicine	100 mM	8.5			68	F 8	Na/K Phosphate	50 mM	5.0	Solubilisin II™	100 % (w/v)
21	B 9	Tris	100 mM	8.5			69	F 9	ADA	50 mM	6.5	Solubilisin II™	100 % (w/v)
22	B 10	CHES	100 mM	9.0			70	F 10	HEPES	50 mM	7.5	Solubilisin II™	100 % (w/v)
23	B 11	CHES	100 mM	9.5			71	F 11	Tris	50 mM	8.5	Solubilisin II™	100 % (w/v)
24	B 12	CAPS	100 mM	10.0			72	F 12	CAPS	50 mM	10.0	Solubilisin II™	100 % (w/v)
25	C 1	Glycine	50 mM	3.0	NaCl	150 mM	73	G 1	Glycine	50 mM	3.0	Glycerol	20 % (w/v)
26	C 2	Sodium Acetate	50 mM	4.5	NaCl	150 mM	74	G 2	Sodium Acetate	50 mM	4.5	Glycerol	20 % (w/v)
27	C 3	Bis-Tris	50 mM	6.0	NaCl	150 mM	75	G 3	Bis-Tris	50 mM	6.0	Glycerol	20 % (w/v)
28	C 4	MOPS	50 mM	7.0	NaCl	150 mM	76	G 4	MOPS	50 mM	7.0	Glycerol	20 % (w/v)
29	C 5	Imidazole	50 mM	8.0	NaCl	150 mM	77	G 5	Imidazole	50 mM	8.0	Glycerol	20 % (w/v)
30	C 6	CHES	50 mM	9.5	NaCl	150 mM	78	G 6	CHES	50 mM	9.5	Glycerol	20 % (w/v)
31	C 7	Citric Acid	50 mM	3.2	NaCl	500 mM	79	G 7	Citric Acid	50 mM	3.2	Betaine	1 M
32	C 8	Na/K Phosphate	50 mM	5.0	NaCl	500 mM	80	G 8	Na/K Phosphate	50 mM	5.0	Betaine	1 M
33	C 9	ADA	50 mM	6.5	NaCl	500 mM	81	G 9	ADA	50 mM	6.5	Betaine	1 M
34	C 10	HEPES	50 mM	7.5	NaCl	500 mM	82	G 10	HEPES	50 mM	7.5	Betaine	1 M
35	C 11	Tris	50 mM	8.5	NaCl	500 mM	83	G 11	Tris	50 mM	8.5	Betaine	1 M
36	C 12	CAPS	50 mM	10.0	NaCl	500 mM	84	G 12	CAPS	50 mM	10.0	Betaine	1 M
37	D 1	Glycine	50 mM	3.0	Trehalose	500 mM	85	H 1	H2O	100 %			
38	D 2	Sodium Acetate	50 mM	4.5	Trehalose	500 mM	86	H 2	H2O	100 %			
39	D 3	Bis-Tris	50 mM	6.0	Trehalose	500 mM	87	H 3					
40	D 4	MOPS	50 mM	7.0	Trehalose	500 mM	88	H 4				AmSulfate	3 M
41	D 5	Imidazole	50 mM	8.0	Trehalose	500 mM	89	H 5				Acetonitrile	80 % (v/v)
42	D 6	CHES	50 mM	9.5	Trehalose	500 mM	90	H 6	PEG 1450	10 %		NaCl	50 mM
43	D 7	Citric Acid	50 mM	3.2	TMAO	500 mM	91	H 7				DTT	1 mM
44	D 8	Na/K Phosphate	50 mM	5.0	TMAO	500 mM	92	H 8				DTT	5 mM
45	D 9	ADA	50 mM	6.5	TMAO	500 mM	93	H 9				DTT	15 mM
46	D 10	HEPES	50 mM	7.5	TMAO	500 mM	94	H 10				BME	2.5 mM
47	D 11	Tris	50 mM	8.5	TMAO	500 mM	95	H 11				BME	10 mM
48	D 12	CAPS	50 mM	10.0	TMAO	500 mM	96	H 12				BME	20 mM

TMAO, Trimethylamine N-Oxide; PIPPS, Piperazine-N, n'-Bis (3-Propanesulfonic Acid); MES, 2-(N-morpholino) ethanesulfonic acid; MOPS, 3-(N-morpholino) propanesulfonic acid; HEPES, 4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid; Arg/Glu*: 50mM of each Arginine and Glutamate; DDT, DL-Dithiothreitol; BME, 2-Mercaptoethanol; Betaine, Trimethyl-Glycine; CAPS, N-cyclohexyl-3-aminopropanesulfonic acid; ADA, N-(2-Acetamido)iminodiacetic Acid; Tris, tris(hydroxymethyl)aminomethane; CHES, 2-(N-Cyclohexylamino)ethane Sulfonic Acid; EPPS, N-(2-hydroxyethyl)piperazine-N'-(3-propanesulfonic acid).
pH values for buffers used only; * each amino acid is 50 mM