

OptiPharma™ Quick Start Guide

Protein Solubility Screening Kit with Approved Pharmaceutical Excipients



Predictive Oncology®

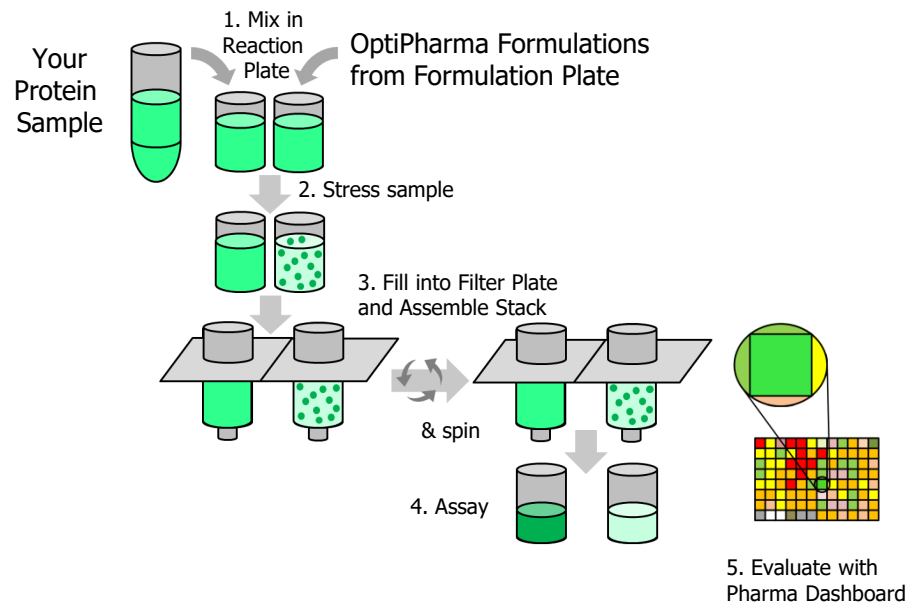
Protocol A: Protein Solubility Profiling

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 Formulation Plate in Reaction Plate (i.e. 96 x 15 µL protein + 150 µL OptiPharma formulations). We suggest to obtain the reference reading of OptiPharma formulations (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 at 3,000 rpm.
4. Assess protein content/function in filtrate. Evaluate data with Pharma Dashboard and identify best solution. Consult OptiPharma Manual for detailed protocol.



Protocol B: Solubilize Aggregated Protein

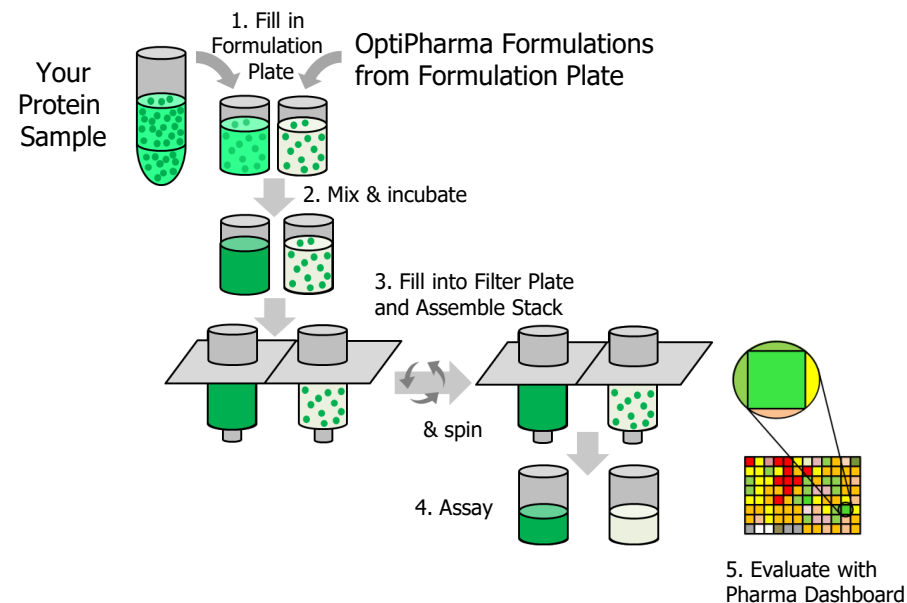
Goal: identify conditions that solubilize an aggregated protein sample

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

Protocol:

1. Fill aliquots of aggregated protein sample into Reaction Plate (i.e. 96 x 15 µL protein + 150 µL OptiPharma Formulations). We suggest to obtain the reference reading of OptiPharma formulations (without protein) for more accurate results.
2. Mix and incubate for more than 10 min.
3. Fill into Filter Plate and assemble Stack (Filter Plate on top, Collection Plate on bottom) and spin 30 min at 3,000 rpm.
4. Assess protein content/function in filtrate. Evaluate data with Pharma Dashboard and identify best solution (www.predictive-oncology.com).

Consult OptiPharma Manual for detailed protocol.



OptiPharma™

Product Information

Content:

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

Purpose

OptiPharma Protein Solubility Screening Kit

Systematic solution design and array-based filtration technology for:

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

For updated instructions and additional information please refer to www.predictive-oncology.com

Order Information

Kit Size	Catalog #	Price USD	Size (kDa)
OptiPharma I	SOL-Pharm-1	399.00	1 – 10
OptiPharma II	SOL-Pharm-2	399.00	10 – 25
OptiPharma III	SOL-Pharm-3	399.00	25 – 90
OptiPharma IV	SOL-Pharm-4	399.00	90 – 250

*Kits can be purchased in 3 pack at discount for \$999.00 USD

Predictive Oncology
200 Riverhills Business Park
Ste. 250
Birmingham, AL 35242
USA

www.predictive-oncology.com
orders@predictive-oncology.com

Formulation Listing

Well		Buffer#			Additive		Well		Buffer#			Additive					
# Row	Col	Conc	unit	pH	NAME	Conc	unit	# Row	Col	Conc	unit	pH	NAME	Conc	unit		
1	A 1				NaCl	60	mM	49	E 1				NaCl	60	mM		
2	A 2				Arg/Glu*	100	mM	50	E 2				Arg/Glu*	100	mM		
3	A 3				Arginine-HCl	30	mM	51	E 3				Arginine-HCl	30	mM		
4	A 4				Glycine	100	mM	52	E 4				Glycine	100	mM		
5	A 5				Poloxamer 188	0.2	%w/v	53	E 5				Poloxamer 188	0.2	%w/v		
6	A 6	Acetate	50	mM	5.0	EDTA	4	mM	54	E 6	Sodium phosphate	50	mM	6.5	EDTA	4	mM
7	A 7				Na bisulfate	6	mM	55	E 7				Na bisulfate	6	mM		
8	A 8				Sucrose	100	mM	56	E 8				Sucrose	100	mM		
9	A 9				Sorbitol	100	mM	57	E 9				Sorbitol	100	mM		
10	A 10				Dextrose	100	mM	58	E 10				Dextrose	100	mM		
11	A 11				Glycerol	6	%w/v	59	E 11				Glycerol	6	%w/v		
12	A 12	Ammonium sulfate	3	M				60	E 12	Sodium lactate	50	mM	6.5				
13	B 1				NaCl	60	mM	61	F 1				NaCl	60	mM		
14	B 2				Arg/Glu*	100	mM	62	F 2				Arg/Glu*	100	mM		
15	B 3				Arginine-HCl	30	mM	63	F 3				Arginine-HCl	30	mM		
16	B 4				Glycine	100	mM	64	F 4				Glycine	100	mM		
17	B 5				Poloxamer 188	0.2	%w/v	65	F 5				Poloxamer 188	0.2	%w/v		
18	B 6	Histidine	50	mM	6.0	EDTA	4	mM	66	F 6	Potassium phosphate	50	mM	7.0	EDTA	4	mM
19	B 7				Na bisulfate	6	mM	67	F 7				Na bisulfate	6	mM		
20	B 8				Sucrose	100	mM	68	F 8				Sucrose	100	mM		
21	B 9				Sorbitol	100	mM	69	F 9				Sorbitol	100	mM		
22	B 10				Dextrose	100	mM	70	F 10				Dextrose	100	mM		
23	B 11				Glycerol	6	%w/v	71	F 11				Glycerol	6	%w/v		
24	B 12	DMSO	5	%v/v				72	F 12	Na/K phosphate	50	mM	7.5	Tween 20	0.004	%w/v	
25	C 1				NaCl	60	mM	73	G 1				NaCl	60	mM		
26	C 2				Arg/Glu*	100	mM	74	G 2				Arg/Glu*	100	mM		
27	C 3				Arginine-HCl	30	mM	75	G 3				Arginine-HCl	30	mM		
28	C 4				Glycine	100	mM	76	G 4				Glycine	100	mM		
29	C 5				Poloxamer 188	0.2	%w/v	77	G 5				Poloxamer 188	0.2	%w/v		
30	C 6	Sodium succinate	50	mM	6.0	EDTA	4	mM	78	G 6	Na/K phosphate	50	mM	7.5	EDTA	4	mM
31	C 7				Na bisulfate	6	mM	79	G 7				Na bisulfate	6	mM		
32	C 8				Sucrose	100	mM	80	G 8				Sucrose	100	mM		
33	C 9				Sorbitol	100	mM	81	G 9				Sorbitol	100	mM		
34	C 10				Dextrose	100	mM	82	G 10				Dextrose	100	mM		
35	C 11				Glycerol	6	%w/v	83	G 11				Glycerol	6	%w/v		
36	C 12	Sample original buffer						84	G 12				Benzyl alcohol	0.2	%w/v		
37	D 1				NaCl	60	mM	85	H 1				NaCl	60	mM		
38	D 2				Arg/Glu*	100	mM	86	H 2				Arg/Glu*	100	mM		
39	D 3				Arginine-HCl	30	mM	87	H 3				Arginine-HCl	30	mM		
40	D 4				Glycine	100	mM	88	H 4				Glycine	100	mM		
41	D 5				Poloxamer 188	0.2	%w/v	89	H 5				Poloxamer 188	0.2	%w/v		
42	D 6	Sodium citrate	50	mM	6.5	EDTA	4	mM	90	H 6	Tris	50	mM	7.5	EDTA	4	mM
43	D 7				Na bisulfate	6	mM	91	H 7				Na bisulfate	6	mM		
44	D 8				Sucrose	100	mM	92	H 8				Sucrose	100	mM		
45	D 9				Sorbitol	100	mM	93	H 9				Sorbitol	100	mM		
46	D 10				Dextrose	100	mM	94	H 10				Dextrose	100	mM		
47	D 11				Glycerol	6	%w/v	95	H 11				Glycerol	6	%w/v		
48	D 12	Glycine	50	mM	3.0	NaCl	500	mM	96	H 12	Tris	50	mM	8.5			

Note:

DMSO: dimethyl sulfoxide. EDTA: ethylenediaminetetraacetic acid. NaCl: sodium chloride. # pH values for buffers used only; * Arginine-HCl/Glutamic acid, each amino acid is 50 mM
Well A12, B12 and C12 are for control experiments.