





MemAdvantage™

MD1-70

An additive screen developed exclusively for membrane proteins. This screen targets all alpha helical types of Prokaryotic and Eukaryotic membrane proteins.

Developed by Simon Newstead and Joanne Parker from University of Oxford, UK.

MD1-70 is presented as a 96 x 0.25 mL in a deep-well SBS block.

Features of MemAdvantage™:

- A rational and intelligently designed additive screen targeted specifically for membrane proteins.
- Allows easy screening of 96 different additives (12 different classes of the following: polyalcohols, detergents, multivalent salts, non-volatile organics etc.) found to be the most successful* in membrane protein crystallization.
- Particularly suited for Prokaryotic and Eukaryotic alpha helical membrane proteins.
- For initial screening or optimization screening.
- Ready-to-use deep-well block.

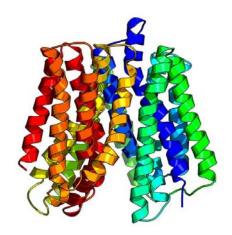
MemAdvantage™ was developed from the identification of successful additives (using data mining) currently used in the crystallization of membrane proteins. It contains a novel set of chemicals presented as a 96-format screen for implementation in robotic screening pipelines. The kit is designed to help test the effect of 96 different compounds on membrane protein crystal growth.

Detergent selection is a critical parameter for growing well-ordered, well diffracting crystals and with so many choices of detergents/ligands to choose it can be both time consuming and expensive to investigate all possibilities.

MemAdvantage™ takes the most successful ligands, detergents, multivalent salts, polyalcohols, non-volatile organics, organics, amphiphiles and puts them all together in one easy-to-use additive screen.

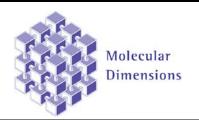
Additives may affect hydration and intermolecular interactions between protein molecules or between protein molecule and solvent and even ligands.

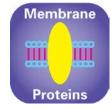
This kit is a screen and results may need to be interpreted with a view to designing further additive experiments using different compounds of the same type as the kit reagent that gave a promising result.



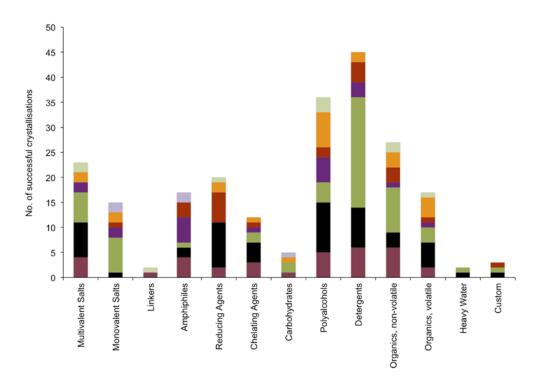
*References:

Parker, J. and Newstead, S. 'Current trends in alpha helical membrane protein crystallization: an update', Protein Science, 2012, 21 (9):1358-1365.

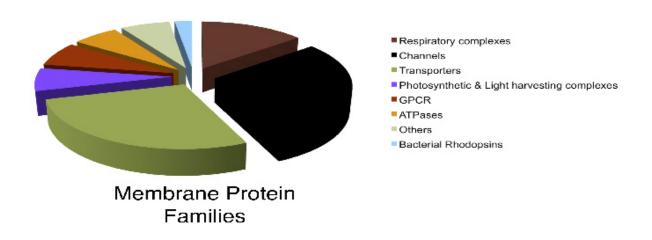


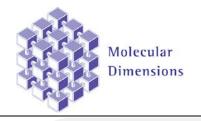


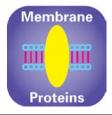




Additives found in MemAdvantage $^{\text{m}}$ and their successfulness in crystallization of membrane proteins - see pie chart below.









Instructions for Use:

We recommend you use a 1/10 dilution of additive to your crystallization screen. You can either place the additive straight into the mother liquor (easiest option) or pipette the screen into another plate and aspirate from this during set-up.

As the screen does contain volatiles it is recommended that the additives are placed in the mother liquor as well.

Recommended storage for MemAdvantage™ is -20°C. Allow block to equilibrate to room temperature prior to use. If any of the reagents have precipitated just warm your block up at 37°C for 20 mins.

Formulation Notes:

MemAdvantageTM reagents are formulated using ultrapure water (>18.0 M Ω) and are sterile-filtered using 0.22 μ m filters. No preservatives are added.

Final pH may vary from that specified on the datasheet. Molecular Dimensions will be happy to discuss the precise formulation of individual reagents.

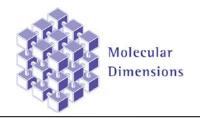
Individual reagents and stock solutions for optimization are available from Molecular Dimensions.

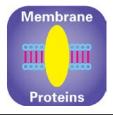
Enquiries regarding MemAdvantage™ formulation, interpretation of results or optimization strategies are welcome. Please e-mail, fax or phone your query to Molecular Dimensions.

Contact and product details can be found at www.moleculardimensions.com

Manufacturer's safety data sheets are available to download from our website.

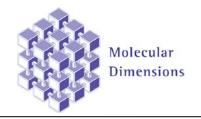
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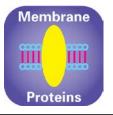






	MemAdvantage™ HT Ro	ws A - D	MD1-70	
Well #	Reagent	Туре	Conc Units	
A1	HEGA-10	Detergent	70.0 mM	
A2	HEGA 11	Detergent	4.2 mM	
А3	C-HEGA-11	Detergent	11.5 mM	
A4	CHAPS	Detergent	60.0 mM	
A5	BigCHAP, deoxy	Detergent	14.0 mM	
A6	ONG (octyl glucose neopentyl glycol)	Detergent	10.2 mM	
A7	DNG (decyl maltose neopentyl glycol)	Detergent	3.6 mM	
A8	LNG (lauryl maltose neopentyl glycol)	Detergent	1.0 mM	
A9	UDTM (n-undecyl-B-D-thiomaltopyranoside)	Detergent	2.1 mM	
A10	NDM (n-nonyl-β-D-maltopyranoside)	Detergent	60.0 mM	
A11	DSM (n-decyl-β-d-thiomaltopyranoside)	Detergent	9.0 mM	
A12	OG (n-octyl-β-D-glucoside)	Detergent	190.0 mM	
B1	DM (n-decyl-β-D-maltopyranoside)	Detergent	18.0 mM	
B2	NG (n-nonyl-β-D-glycopyranoside)	Detergent	65.0 mM	
B3	DDM (n-dodecyl-β-D-maltopyranoside)	Detergent	1.7 mM	
B4	HTG (n-heptyl-β-D-thioglucopyranoside)	Detergent	290.0 mM	
B5	LAPAO (3-laurylamido-N,N'-dimethylpropyl ami	=	15.6 mM	
B6	LDAO (n-dodecyl-N,N-dimethylamine-N-oxide)	Detergent	15.0 mM	
B7	CYMAL®-1	Detergent	340.0 mM	
38	CYMAL®-2	Detergent	120.0 mM	
39	CYMAL®-4	Detergent	76.0 mM	
ວອ 310	CYMAL®-5	Detergent	37.0 mM	
B10 B11	CYMAL®-6	Detergent	5.6 mM	
B12	CYMAL®-7	Detergent	1.9 mM	
C1	Fos-Choline-9	Detergent	39.5 mM	
C2	Fos-Choline-12	Detergent	15.0 mM	
C3	C8E4 (tetraethylene glycol monooctyl ether)	Detergent	80.0 mM	
C4	C12E8 (octaethylene glycol monododecyl ether)	=	0.9 mM	
	Anzergent® 3-12	Detergent	30.0 mM	
C5	_		10.2 mM	
C6 C7	OM-fluorinated (octyl maltoside flourinated) UDM (n-undecyl-β-D-maltoside)	Detergent	5.9 mM	
	Tri DM (n-tridecyl-β-D-maltoside)	Detergent		
C8	, , , , , , , , , , , , , , , , , , , ,	Detergent	0.3 mM	
C9	sucrose monocaprate (Sucrose monodecanoa Sucrose monododecanoate	_	25.0 mM 3.0 mM	
C10	TRIPAO	Detergent	45.0 mM	
C11	MERPOL® HCS surfactant	Detergent		
C12		Detergent	5.0 % V/V	
D1	DMG (n-dodecyl-N,N-dimethylglycine)	Detergent	15.0 mM	
D2	Potassium Chloride	Monovalent	100.0 mM	
D3	Potassium Fluoride	Monovalent	100.0 mM	
D4	Potassium Silicate	Monovalent	100.0 mM	
D5	Sodium Azida	Monovalent	100.0 mM	
D6	Sodium Azide	Monovalent	100.0 mM	
D7	Sodium Chloride	Monovalent	100.0 mM	
D8	Sodium Fluoride	Monovalent	100.0 mM	
D9	Sodium Phosphate dibasic	Monovalent	100.0 mM	
D10	Lithium Citrate tribasic tetrahydrate	Monovalent	100.0 mM	
D11	Lithium Sulfate	Monovalent	100.0 mM	
D12	Rubidium Chloride	Monovalent	100.0 mM	

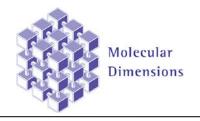


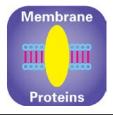




MemAdvantage™ HT Rows E - H MD1-70

E1 Ammonium Sulfate Multivalent 100.0 mM E2 Ammonium Sulfate Multivalent 100.0 mM E3 Cadrium Chloride hemi(pentahydrate) Multivalent 100.0 mM E4 Calcium Chloride dhydrate Multivalent 100.0 mM E5 Chromium (III) Chloride hexahydrate Multivalent 100.0 mM E6 Cobalt (II) Chloride hexahydrate Multivalent 100.0 mM E7 Copper(III) Chloride hexahydrate Multivalent 100.0 mM E9 Magnesium Chloride hexahydrate Multivalent 100.0 mM E9 Magnesium Sulfate heptahydrate Multivalent 100.0 mM E10 Magnesium sulfate heptahydrate Multivalent 100.0 mM E11 Manganese(III) Chloride hexahydrate Multivalent 100.0 mM E12 Osmium (III) Chloride hexahydrate Multivalent 100.0 mM F1 Samarium (III) Chloride hexahydrate Multivalent 100.0 mM F2 Strontium Chloride hexahydrate Multivalent 100.0 mM F2 Strontium Chlorid	Well #	Reagent	Туре	Conc Units
E3 Cadmium Chloride hemi(pentahydrate) Multivalent 100.0 mM E4 Calcium Chloride lihydrate Multivalent 100.0 mM 55 Chromium (III) Chloride hexahydrate Multivalent 100.0 mM E6 Cobalt (II) Chloride hexahydrate Multivalent 100.0 mM E7 Copper (II) Chloride hexahydrate Multivalent 100.0 mM E9 Magnesium Chloride hexahydrate Multivalent 100.0 mM E10 Magnesium sulfate heptahydrate Multivalent 100.0 mM E11 Manganese(III) Chloride hexahydrate Multivalent 100.0 mM E12 Osmium (III) Chloride hexahydrate Multivalent 100.0 mM E12 Samarium (IIII) Chloride hexahydrate Multivalent 100.0 mM F1 Samarium (IIII) Chloride hexahydrate Multivalent 100.0 mM F2 Strontium Chloride hexahydrate Multivalent 100.0 mM F3 Zinc Sulfate heptahydrate Multivalent 100.0 mM F4 Zinc Sulfate hexahydrate Multivalent 100.0 mM F5	E1	Ammonium Citrate tribasic	Multivalent	100.0 mM
E4 Calcium Chloride dihydrate Multivalent 100.0 mM E5 Chromium (III) Chloride hexahydrate Multivalent 100.0 mM E6 Cobalt (II) Chloride hexahydrate Multivalent 100.0 mM E7 Copper (II) Chloride Multivalent 100.0 mM E8 Gadolinium (III) Chloride hexahydrate Multivalent 100.0 mM E9 Magnesium Chloride hexahydrate Multivalent 100.0 mM E10 Magnesium sulfate heptahydrate Multivalent 100.0 mM E11 Manganesse(II) chloride tetrahydrate Multivalent 100.0 mM E12 Osmium (III) Chloride hexahydrate Multivalent 100.0 mM F1 Samarium (III) Chloride hexahydrate Multivalent 100.0 mM F2 Strontium Chloride hexahydrate Multivalent 100.0 mM F3 Zinc Nitrate hexahydrate Multivalent 100.0 mM F4 Zinc Sulfate heptahydrate Multivalent 100.0 mM F4 Zinc Sulfate heptahydrate Multivalent 100.0 mM F4 Zinc Sulfate	E2	Ammonium Sulfate	Multivalent	100.0 mM
E5 Chromium (III) Chloride hexahydrate Multivalent 100.0 mM E6 Cobalt (II) Chloride hexahydrate Multivalent 100.0 mM E7 Copper(II) Chloride Multivalent 100.0 mM E8 Gadolinium (III) Chloride hexahydrate Multivalent 100.0 mM E9 Magnesium Sulfate heptahydrate Multivalent 100.0 mM E11 Manganese (II) chloride tetrahydrate Multivalent 100.0 mM E12 Osmium (III) Chloride hexahydrate Multivalent 100.0 mM F1 Sarrarium (III) Chloride hexahydrate Multivalent 100.0 mM F2 Strontium Chloride hexahydrate Multivalent 100.0 mM F3 Zinc Nitrate hexahydrate Multivalent 100.0 mM F4 Zinc Sulfate heptahydrate Multivalent 100.0 mM F5 1,3-propanediol Organic, volatile 00.0 mM F6 1,4-butanediol Organic, volatile 0.2 % vv F7 1-butanol Organic, volatile 10.0 % vv F8 Ethanol Organic, volat	E3	Cadmium Chloride hemi(pentahydrate)	Multivalent	100.0 mM
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E12 Osmium(III) Chloride hydrate Multivalent 100.0 mM F1 Samarium(III) Chloride hexahydrate Multivalent 100.0 mM F2 Strontium Chloride hexahydrate Multivalent 100.0 mM F3 Zinc Nitrate hexahydrate Multivalent 100.0 mM F4 Zinc Sulfate heptahydrate Multivalent 100.0 mM F5 1,3-propanediol Organic, volatile 0.2 % vV F6 1,4-butanediol Organic, volatile 7.0 % vV F7 1-butanol Organic, volatile 10.0 % vV F8 Ethanol Organic, volatile 10.0 % vV F9 2-Propanol Organic, volatile 10.0 % vV F10 tert-Butanol Organic, volatile 10.0 % vV F11 Triethylammonium Phosphate Organic, volatile 10.0 % vV F12 Deuterium Oxide Heavy water 10.0 mM G1 L-Glutatihone reduced Organic, non volatile 10.0 mM G2 MPD Organic, non volatile 0.0 mM G3	E11	· · ·	Multivalent	100.0 mM
F2 Strontium Chloride hexahydrate 73 Zinc Nitrate hexahydrate 74 Zinc Sulfate heptahydrate 75 Aj-propanediol 76 1,3-propanediol 77 I-butanol 78 Ethanol 79 2-Propanol 79 2-Propanol 70 tert-Butanol 71 Triethylammonium Phosphate 71 Triethylammonium Phosphate 71 Douterium Oxide 72 MPD 73 PEG 400 74 Polyvinylpyrrolidone 75 Spermidine 75 Taurine 76 PEG 600 77 Jeffamine® M-600 pH 7.0 78 PEG 600 79 Ajeffamine® M-600 pH 7.0 79 Dimethyl sulfoxide (DMSO) 70 Dimethyl sulfoxide (DMSO) 71 Foscarnet (phosphoformic acid) 71 EGTA 71 Fibralose 71 Chelating agent 71 Chelating agent 71 Chelating agent 71 Chel MED 71 Carbonydrate 71 Chelating agent 71 Chel Multivalent 71 On 0 mM 71 Divition Proposed 71 Divition Proposed 72 Deuterium Oxide 73 PEG 400 74 Polyvinylpyrrolidone 75 Deymidine 75 Deymidi	E12	• , ,	Multivalent	100.0 mM
F2 Strontium Chloride hexahydrate 73 Zinc Nitrate hexahydrate 74 Zinc Sulfate heptahydrate 75 Aj-propanediol 76 Aj-propanediol 77 Aj-butanol 78 Ethanol 79 2-Propanol 79 2-Propanol 70 Crganic, volatile 70 W vV 70 Aj-Butarione 70 Ag-Butarine	F1	• • •	Multivalent	100.0 mM
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F4 Zinc Sulfate heptahydrate Multivalent 100.0 mM F5 1,3-propanediol Organic, volatile 0.2 % v/v F6 1,4-butanediol Organic, volatile 0.2 % v/v F7 1-butanol Organic, volatile 7.0 % v/v F8 Ethanol Organic, volatile 10.0 % v/v F9 2-Propanol Organic, volatile 5.0 % v/v F10 tert-Butanol Organic, volatile 10.0 % v/v F11 Triethylammonium Phosphate Organic, volatile 10.0 % v/v F12 Deuterium Oxide Heavy water 1.0 mM G1 L-Glutathione reduced Organic, non volatile 100.0 mM G2 MPD Organic, non volatile 15.0 % v/v G3 PEG 400 Organic, non volatile 15.0 % v/v G4 Polyvinylpyrrolidone Organic, non volatile 5.0 % w/v G5 Spermidine Organic, non volatile 0.16 % v/v G6 Taurine Organic, non volatile 0.2 % w/v G7 Jeffamine® M-600 pH 7.0 Organic, non volatile 0.2 % w/v G8 PEG 600 Organic, non volatile 15.0 % v/v G9 1,6-Hexanediol Organic, non volatile 30.0 % v/v	F3	•	Multivalent	100.0 mM
F5 1,3-propanediol Organic, volatile 0.2 % v/v F6 1,4-butanediol Organic, volatile 0.2 % v/v F7 1-butanol Organic, volatile 7.0 % v/v F8 Ethanol Organic, volatile 10.0 % v/v F9 2-Propanol Organic, volatile 10.0 % v/v F10 tert-Butanol Organic, volatile 10.0 % v/v F11 Triethylammonium Phosphate Organic, volatile 10.0 % v/v F12 Deuterium Oxide Heavy water 1.0 mM G2 MPD Organic, non volatile 15.0 % w/v G3 PEG 400 Organic, non volatile 15.0 % v/v G4 Polyvinylpyrrolidone Organic, non volatile 15.0 % v/v G5 Spermidine Organic, non volatile 0.16 % v/v G6 Taurine Organic, non volatile 0.2 % w/v G7 Jeffamine® M-600 pH 7.0 Organic, non volatile 0.2 % w/v G8 PEG 600 Organic, non volatile 0.2 % w/v G9 1,6-Hexanediol Organic, non volatile 0.2 % w/v G10 </td <td></td> <td>•</td> <td>Multivalent</td> <td></td>		•	Multivalent	
F6 1,4-butanediol Organic, volatile 0.2 % v/v F7 1-butanol Organic, volatile 7.0 % v/v F8 Ethanol Organic, volatile 10.0 % v/v F9 2-Propanol Organic, volatile 5.0 % v/v F10 tent-Butanol Organic, volatile 10.0 % v/v F11 Triethylammonium Phosphate Organic, volatile 10.0 % v/v F12 Deuterium Oxide Heavy water 1.0 mM G1 L-Glutathione reduced Organic, non volatile 15.0 % w/v G2 MPD Organic, non volatile 15.0 % w/v G3 PEG 400 Organic, non volatile 15.0 % w/v G4 Polyvinylpyrrolidone Organic, non volatile 5.0 % w/v G5 Spermidine Organic, non volatile 0.16 % w/v G6 Taurine Organic, non volatile 0.2 % w/v G7 Jeffamine® M-600 pH 7.0 Organic, non volatile 0.2 % w/v G8 PEG 600 Organic, non volatile 0.2 % w/v G9			Organic, volatile	0.2 % v/v
F7 1-butanol Organic, volatile 7.0 % v/v F8 Ethanol Organic, volatile 10.0 % v/v F9 2-Propanol Organic, volatile 5.0 % v/v F10 tert-Butanol Organic, volatile 5.0 % v/v F10 tert-Butanol Organic, volatile 10.0 % v/v F11 Triethylammonium Phosphate Organic, volatile 10.0 % v/v F12 Deuterium Oxide Heavy water 1.0 mM G1 L-Glutathione reduced Organic, non volatile 15.0 mM G2 MPD Organic, non volatile 15.0 % v/v G3 PEG 400 Organic, non volatile 15.0 % v/v G4 Polyvinylpyrrolidone Organic, non volatile 0.16 % v/v G5 Spermidine Organic, non volatile 0.16 % v/v G6 Taurine Organic, non volatile 0.2 % w/v G7 Jeffamine® M-600 pH 7.0 Organic, non volatile 0.2 % w/v G8 PEG 600 Organic, non volatile 15.0 % v/v G9 1,6-Hexanediol Organic, non volatile 0.2 % w/v G11 Foscarnet (phosphoformic acid) Organic, non volatile 30.0 % v/v G11 Foscarnet (phosphoformic acid) Organic, non volatile 30.0 % w/v H1 1,2,3-Heptanetriol Amphiphiles 0.2 % w/v H2 Benzamidine hydrochloride Amphiphiles 20.0 % w/v H3 Ethylene Glycol Polyalcohol 30.0 % v/v H5 EDTA Chelating agent 100.0 mM G12 GIA Chelating agent 100.0 mM G14 EGTA Chelating agent 100.0 mM G15 EDTA Chelating agent 100.0 mM G16 EGTA Chelating agent 100.0 mM G17 Sucrose Carbohydrate 40.0 % w/v G17 Sucrose Carbohydrate 30.0 % w/v G17 Sucrose Carbohydrate 30.0 % w/v G17 Sucrose Carbohydrate 30.0 mM G2 Carbohydrat			-	0.2 % v/v
F8 Ethanol Organic, volatile 10.0 % v/v F9 2-Propanol Organic, volatile 5.0 % v/v F10 tert-Butanol Organic, volatile 10.0 % v/v F11 Triethylammonium Phosphate Organic, volatile 10.0 % v/v F12 Deuterium Oxide Heavy water 1.0 mM G1 L-Glutathione reduced Organic, non volatile 15.0 % w/v G2 MPD Organic, non volatile 15.0 % w/v G3 PEG 400 Organic, non volatile 15.0 % w/v G4 Polyvinylpyrrolidone Organic, non volatile 5.0 % w/v G5 Spermidine Organic, non volatile 0.16 % w/v G6 Taurine Organic, non volatile 0.2 % w/v G7 Jeffamine® M-600 pH 7.0 Organic, non volatile 0.2 % w/v G8 PEG 600 Organic, non volatile 10.0 % w/v G9 1,6-Hexanediol Organic, non volatile 30.0 % w/v G10 Dimethyl sulfoxide (DMSO) Organic, non volatile 30.0 % w/v G11 Foscarnet (phosphoformic acid) Organic, non volatile			_	
F92-PropanolOrganic, volatile5.0 % v/vF10tert-ButanolOrganic, volatile10.0 % v/vF11Triethylammonium PhosphateOrganic, volatile10.0 % v/vF12Deuterium OxideHeavy water1.0 mMG1L-Glutathione reducedOrganic, non volatile100.0 mMG2MPDOrganic, non volatile15.0 % v/vG3PEG 400Organic, non volatile15.0 % v/vG4PolyvinylpyrrolidoneOrganic, non volatile5.0 % w/vG5SpermidineOrganic, non volatile0.16 % v/vG6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile15.0 % v/vG8PEG 600Organic, non volatile15.0 % v/vG91,6-HexanediolOrganic, non volatile15.0 % v/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile30.0 % v/vG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH6<		Ethanol	_	10.0 % v/v
F10tert-ButanolOrganic, volatile10.0 % v/vF11Triethylammonium PhosphateOrganic, volatile10.0 % v/vF12Deuterium OxideHeavy water1.0 mMG1L-Glutathione reducedOrganic, non volatile100.0 mMG2MPDOrganic, non volatile15.0 % v/vG3PEG 400Organic, non volatile15.0 % v/vG4PolyvinylpyrrolidoneOrganic, non volatile5.0 % w/vG5SpermidineOrganic, non volatile0.16 % v/vG6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % v/vG8PEG 600Organic, non volatile15.0 % v/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile30.0 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 m/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102	F9	2-Propanol	_	5.0 % v/v
F11Triethylammonium PhosphateOrganic, volatile10.0 % v/vF12Deuterium OxideHeavy water1.0 mMG1L-Glutathione reducedOrganic, non volatile100.0 mMG2MPDOrganic, non volatile15.0 % v/vG3PEG 400Organic, non volatile15.0 % v/vG4PolyvinylpyrrolidoneOrganic, non volatile5.0 % w/vG5SpermidineOrganic, non volatile0.16 % v/vG6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % v/vG8PEG 600Organic, non volatile15.0 % v/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile30.0 mMG12Glutaric AcidOrganic, non volatile80.0 mMH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate30.0 % w/vH8D-TrehaloseCarbohydrate30.0 m/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-	F10	·	_	10.0 % v/v
F12Deuterium OxideHeavy water1.0 mMG1L-Glutathione reducedOrganic, non volatile100.0 mMG2MPDOrganic, non volatile15.0 % v/vG3PEG 400Organic, non volatile15.0 % v/vG4PolyvinylpyrrolidoneOrganic, non volatile5.0 % w/vG5SpermidineOrganic, non volatile0.16 % v/vG6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % v/vG8PEG 600Organic, non volatile15.0 % w/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile0.2 % w/vG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles0.2 % w/vH3Ethylene GlycolPolyalcohol30.0 % w/vH4GlycerolPolyalcohol30.0 % w/vH5EDTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate40.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME) <td>F11</td> <td>Triethylammonium Phosphate</td> <td>_</td> <td>10.0 % v/v</td>	F11	Triethylammonium Phosphate	_	10.0 % v/v
G1L-Glutathione reducedOrganic, non volatile100.0 mMG2MPDOrganic, non volatile15.0 % v/vG3PEG 400Organic, non volatile15.0 % v/vG4PolyvinylpyrrolidoneOrganic, non volatile5.0 % w/vG5SpermidineOrganic, non volatile0.16 % v/vG6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % v/vG8PEG 600Organic, non volatile15.0 % v/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile30.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate40.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent100.0 mM	F12	·	-	1.0 mM
G2MPDOrganic, non volatile15.0 % v/vG3PEG 400Organic, non volatile15.0 % v/vG4PolyvinylpyrrolidoneOrganic, non volatile5.0 % w/vG5SpermidineOrganic, non volatile0.16 % v/vG6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % v/vG8PEG 600Organic, non volatile15.0 % v/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % w/vH5EDTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent100.0 mMH11TCEPReducing agent100.0 mM	G1	L-Glutathione reduced	Organic, non volatile	100.0 mM
G4PolyvinylpyrrolidoneOrganic, non volatile5.0 % w/vG5SpermidineOrganic, non volatile0.16 % w/vG6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % w/vG8PEG 600Organic, non volatile15.0 % w/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % w/vG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % w/vH4GlycerolPolyalcohol30.0 % w/vH5EDTAChelating agent10.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent100.0 mMH11TCEPReducing agent100.0 mM	G2	MPD	Organic, non volatile	15.0 % v/v
G5SpermidineOrganic, non volatile0.16 % ψνG6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % ψνG8PEG 600Organic, non volatile15.0 % ψνG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % ψνG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % √vH4GlycerolPolyalcohol30.0 % w/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent100.0 mMH11TCEPReducing agent100.0 mM	G3	PEG 400	Organic, non volatile	15.0 % v/v
G6TaurineOrganic, non volatile0.2 % w/vG7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % w/vG8PEG 600Organic, non volatile15.0 % w/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % w/vG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % w/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G4	Polyvinylpyrrolidone	Organic, non volatile	5.0 % w/v
G7Jeffamine® M-600 pH 7.0Organic, non volatile10.0 % v/vG8PEG 600Organic, non volatile15.0 % v/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G5	Spermidine	Organic, non volatile	0.16 % v/v
G8PEG 600Organic, non volatile15.0 % v/vG91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G6	Taurine	Organic, non volatile	0.2 % w/v
G91,6-HexanediolOrganic, non volatile0.2 % w/vG10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G7	Jeffamine® M-600 pH 7.0	Organic, non volatile	10.0 % v/v
G10Dimethyl sulfoxide (DMSO)Organic, non volatile30.0 % v/vG11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G8	PEG 600	Organic, non volatile	15.0 % v/v
G11Foscarnet (phosphoformic acid)Organic, non volatile80.0 mMG12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G9	1,6-Hexanediol	Organic, non volatile	0.2 % w/v
G12Glutaric AcidOrganic, non volatile0.2 % w/vH11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G10	Dimethyl sulfoxide (DMSO)	Organic, non volatile	30.0 % v/v
H11,2,3-HeptanetriolAmphiphiles0.2 % w/vH2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G11	Foscarnet (phosphoformic acid)	Organic, non volatile	80.0 mM
H2Benzamidine hydrochlorideAmphiphiles20.0 % w/vH3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	G12	Glutaric Acid	Organic, non volatile	0.2 % w/v
H3Ethylene GlycolPolyalcohol30.0 % v/vH4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	H1	1,2,3-Heptanetriol		0.2 % w/v
H4GlycerolPolyalcohol30.0 % v/vH5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	H2	Benzamidine hydrochloride	Amphiphiles	20.0 % w/v
H5EDTAChelating agent100.0 mMH6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	H3	Ethylene Glycol	Polyalcohol	30.0 % v/v
H6EGTAChelating agent10.0 mMH7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	H4	Glycerol	Polyalcohol	30.0 % v/v
H7sucroseCarbohydrate40.0 % w/vH8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	H5	EDTA	Chelating agent	100.0 mM
H8D-TrehaloseCarbohydrate30.0 % w/vH9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	H6	EGTA		10.0 mM
H9Dithiothreitol (DTT)Reducing agent100.0 mMH102-Mercaptoethanol (β-ME)Reducing agent30.0 mMH11TCEPReducing agent100.0 mM	H7		•	
H10 2-Mercaptoethanol (β-ME) Reducing agent 30.0 mM H11 TCEP Reducing agent 100.0 mM	H8	D-Trehalose	•	30.0 % w/v
H11 TCEP Reducing agent 100.0 mM	H9	· · ·	• •	
	H10	. ,		
Linkow 2000 M			• •	
H12 Gly-Gly Linker 300.0 min	H12	Gly-Gly-Gly	Linker	300.0 mM







Abbreviations:

MPD: 2-methyl, 2,4-pentanediol, PEG: Poly Ethylene Glycol, DMSO:Dimethyl Sulfoxide, EDTA: Ethylenediaminetetraacetic acid, EGTA: ethylene glycol tetraacetic acid, DTT: TCEP: HEGA-10: Decanoyl-N-Hydroxyethylglucamide, HEGA-11; Undecanoyl-N-Hydroxyethylglucamide, C-HEGA-11: Cyclohexylpentanoyl-N-Hydroxyethylglucamide CHAPS: 3-[(3-Cholamidopropyl)-Dimethylammonio]-1-Propane Sulfonate/N,N-Dimethyl-3-Sulfo-N-[3-[[3α,5β,7α,12α)-3,7,12-Trihydroxy-24-Oxocholan-24-yl]Amino]propyl]-1-Propanaminium Hydroxide, Inner Salt, BIG CHAP, deoxy: N,N'-bis-(3-D Gluconamidopropyl)Deoxycholamide, CYMAL®-1,: Cyclohexyl-Methyl-β-D-Maltoside, CYMAL®-2: 2-Cyclohexyl-1-Ethyl-β-D-Maltoside, CYMAL®-4: 4-Cyclohexyl-1-Butyl-β-D-Maltoside, CYMAL®-5: 5-Cyclohexyl-1-Pentyl-β-D-Maltoside, CYMAL®-6: 6-Cyclohexyl-1-Hexyl-β-D-Maltoside, CYMAL®-7: 7-Cyclohexyl-1-Heptyl-β-D-Maltoside, Anzergent® 3-12: n-Dodecyl-N,N-Dimethyl-3-Ammonio-1-Propanesulfonate / N,N-Dimethyl-1-N-(3-Sulfopropyl)-1-Dodecanaminium Hydroxide, Inner Salt, TRIPAO: ((3-(3 Butyl-3-Phenylheptanamido)-N,N-Dimethylpropan-1-Amine Oxide)).

Manufacturer's safety data sheets are available from our website or by scanning the QR code here:



Ordering details:

Catalogue Description Catalogue Code

MemAdvantage™ MD1-70

MemAdvantage™ single reagents MDSR-70-well number

For MemAdvantage™ stock reagents go to Optimization on our website.