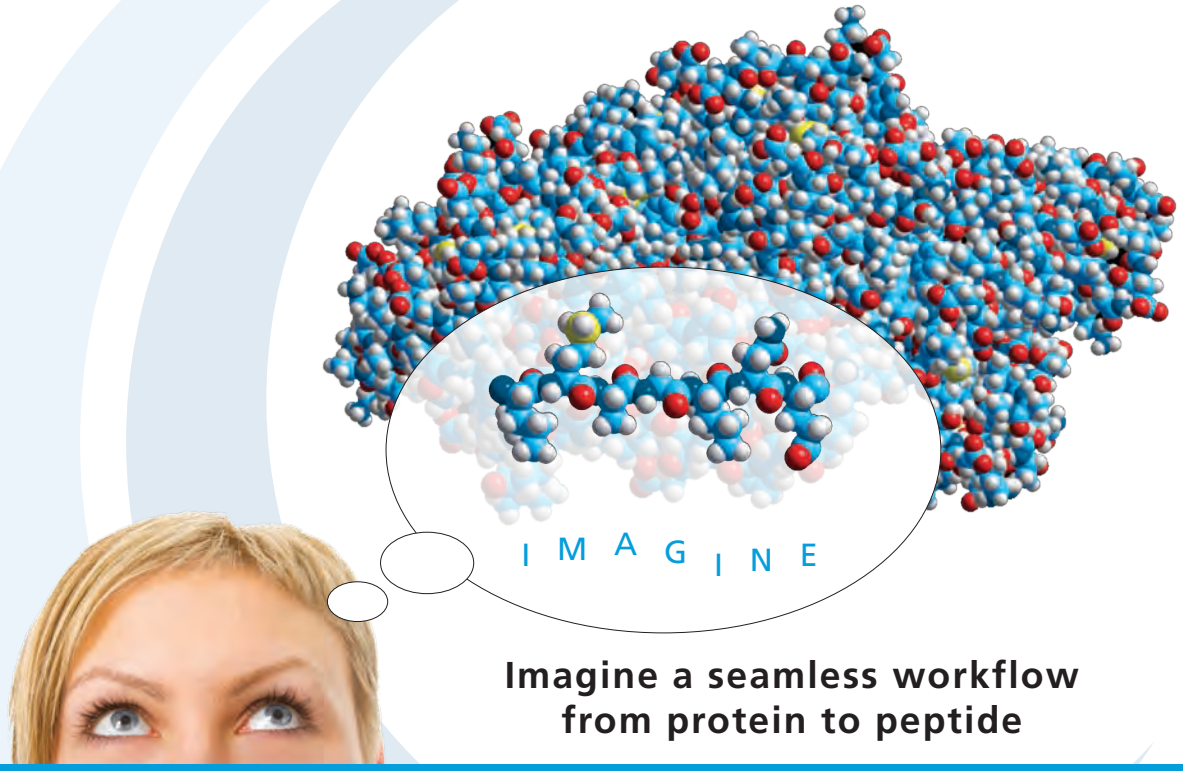

Imagine a seamless workflow from protein to peptide

ProteCol™ HPLC Columns **turn imagination into results**

50 SGE years 1960 - 2010

SGE Analytical Science

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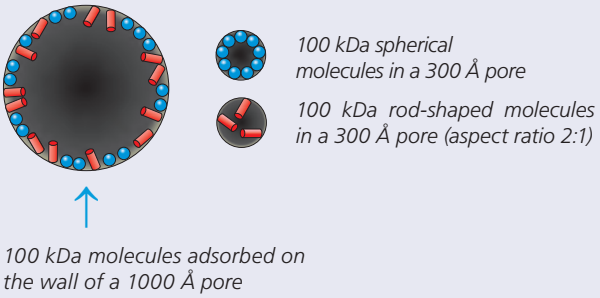
ProteCol™-G C8 HPLC columns solve the problem of separating large proteins, including membrane proteins.

How does ProteCol™ turn imagination to results?

ProteCol™-G C8 columns combine these key features:

- 1000 Å pore size
- Intermediate polarity C8 phase
- Inert glass lined column hardware

Why choose 1000 Å pore size?



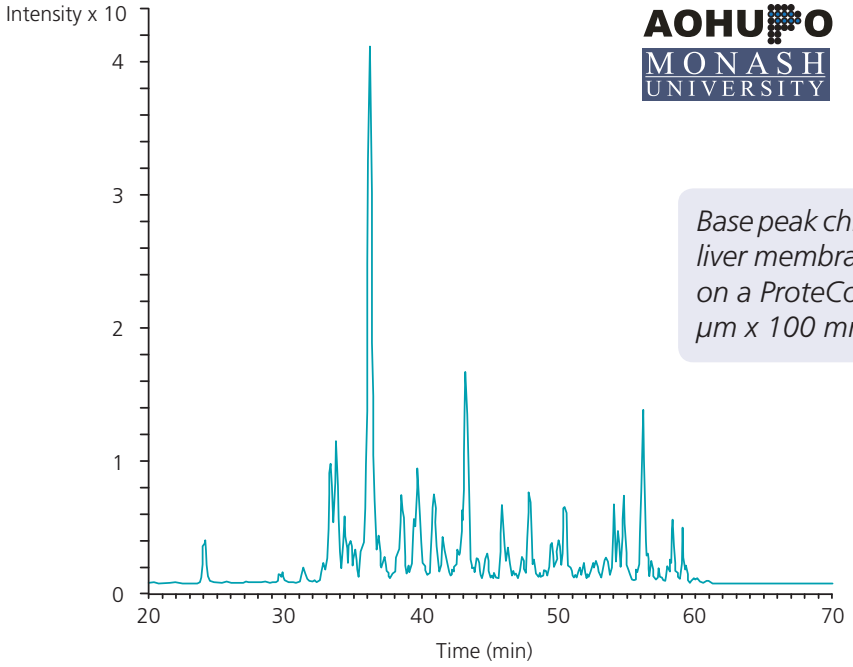
100 kDa spherical molecules in a 300 Å pore

100 kDa rod-shaped molecules in a 300 Å pore (aspect ratio 2:1)

100 kDa molecules adsorbed on the wall of a 1000 Å pore

1000 Å pore size silicas enable large irregular shaped proteins to bind to the bonded phase without restricting access to the pore - compared to 300 Å silicas whose pores are easily blocked by large proteins.

ProteCol™-G C8's large pore size, C8 phase plus column hardware turn imagination into results by enabling this impressive recovery of intact membrane proteins.



AOHUO MONASH UNIVERSITY

Base peak chromatogram of mouse liver membrane proteins separated on a ProteCol™-G C8 HQ1003 300 µm x 100 mm column.

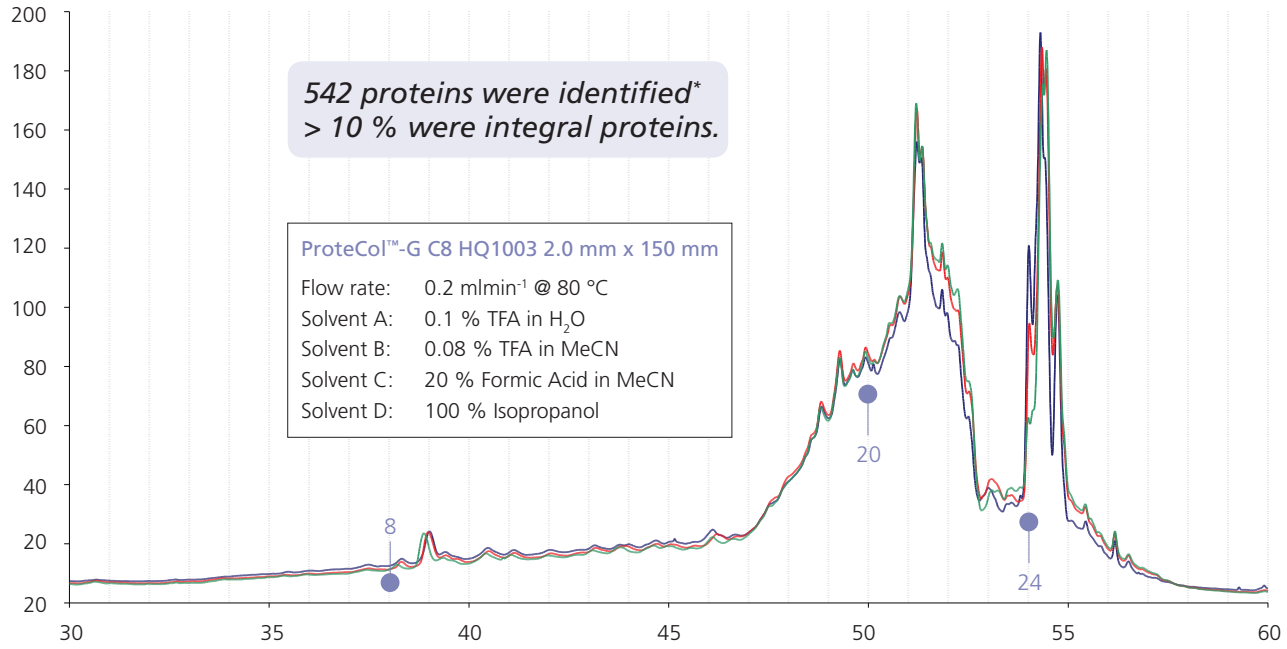
Separation of intact membrane proteins derived from mouse liver with ProteCol™-G C8 1000

ProteCol™-G turns imagination into results by enabling HPLC for membrane proteins

- Continuity of using HPLC for all separation needs simplifies your workflow
- Facilitates the use of MS
- Eliminate SDS-PAGE from your workflow

Can you imagine being able to separate this many proteins on any other HPLC colum?

Micro-preparative separation of proteins extracted from a mouse liver microsomal preparation#

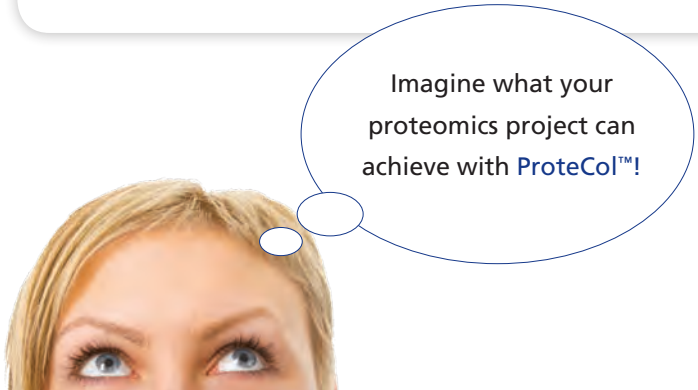


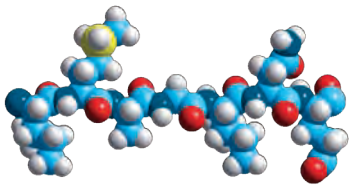
Examples of integral membrane proteins separated by ProteCol™-G C8

Fraction No.	Description	No. of predicted Transmembrane Helices
8	Transmembrane emp 24-like trafficking protein	2
20	B-cell receptor-associated protein	3
24	Solute carrier family 4 – anion exchange	12

Three consecutive runs overlaid

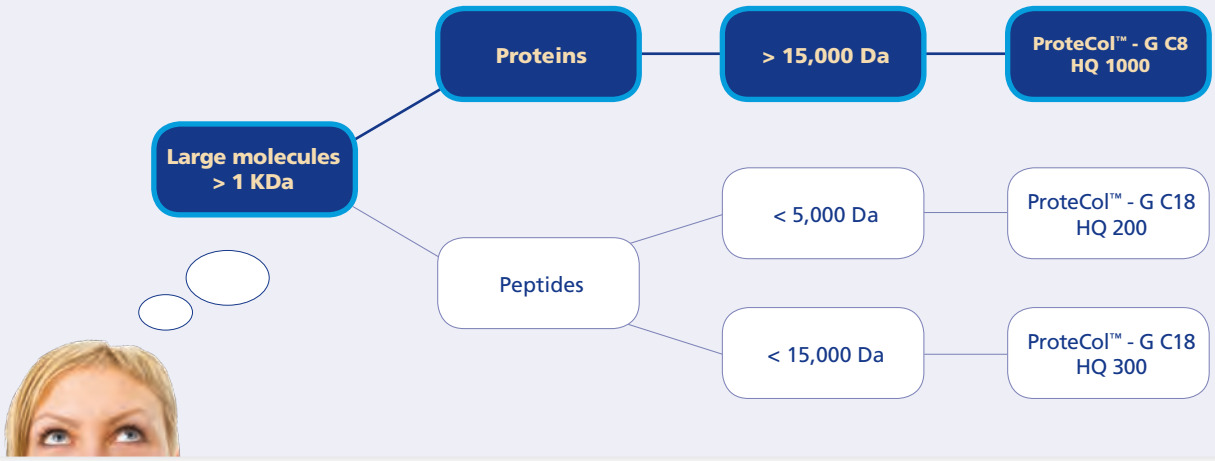
* Collected fractions were digested with trypsin and the resulting peptides were separated in a ProteCol™-G C18 G HQ303 and analysed on a Thermo Scientific linear ion trap MS. Resulting mzXML files were searched against the ENSEMBL mouse data base using GPM-Xt software. Proteins were identified with a protein expectation cutoff value of 10^{-10}.





HPLC Column Selection Guide

Whether your proteomics strategy is top down or bottom up - we have the column for you!



ProteCol™ HPLC Column Specifications and Part numbers

ProteCol™ Column	Stationary Phase	Pore Size (Å)	Particle Size (µm)	Lining	Pore Volume (ml)	Surface Area (m^2/g)	Carbon Load (%)	Calculated Bonded Phase (µmol/m^2)	ID Coverage	length (mm)	Part Number
G C8 HQ1003	C8 HQ	1000	3	Glass	0.8 ± 0.1	25 ± 5	0.7	2.33	2.1 mm	150	250170
G C8 HQ1003	C8 HQ	1000	3	Glass	0.8 ± 0.1	25 ± 5	0.7	2.33	2.1 mm	100	250172
G C8 HQ1003	C8 HQ	1000	3	PEEKsil™	0.8 ± 0.1	25 ± 5	0.7	2.33	300 µm	150	250175
G C8 HQ1003	C8 HQ	1000	3	PEEKsil™	0.8 ± 0.1	25 ± 5	0.7	2.33	300 µm	100	250177
G C8 HQ1003	C8 HQ	1000	3	PEEKsil™	0.8 ± 0.1	25 ± 5	0.7	2.33	150 µm	150	250180
G C8 HQ1003	C8 HQ	1000	3	PEEKsil™	0.8 ± 0.1	25 ± 5	0.7	2.33	150 µm	100	250182
G C18 HQ203	C18 HQ	200	3	Glass	1.0 ± 0.1	200 ± 30	12.6	2.63	2.1 mm	150	250150
G C18 HQ203	C18 HQ	200	3	Glass	1.0 ± 0.1	200 ± 30	12.6	2.63	2.1 mm	100	250152
G C18 HQ203	C18 HQ	200	3	PEEKsil™	1.0 ± 0.1	200 ± 30	12.6	2.63	300 µm	150	250155
G C18 HQ203	C18 HQ	200	3	PEEKsil™	1.0 ± 0.1	200 ± 30	12.6	2.63	300 µm	100	250157
G C18 HQ203	C18 HQ	200	3	PEEKsil™	1.0 ± 0.1	200 ± 30	12.6	2.63	150 µm	150	250160
G C18 HQ203	C18 HQ	200	3	PEEKsil™	1.0 ± 0.1	200 ± 30	12.6	2.63	150 µm	100	250162
G C18 HQ303	C18 HQ	300	3	PEEKsil™	1.0 ± 0.1	100 ± 20	7.4	3.08	2.1 mm	150	250135
G C18 HQ303	C18 HQ	300	3	Glass	1.0 ± 0.1	100 ± 20	7.4	3.08	2.1 mm	100	250132
G C18 HQ303	C18 HQ	300	3	Glass	1.0 ± 0.1	100 ± 20	7.4	3.08	2.1 mm	150	250130
G C18 HQ303	C18 HQ	300	3	PEEKsil™	1.0 ± 0.1	100 ± 20	7.4	3.08	300 µm	100	250137
G C18 HQ303	C18 HQ	300	3	PEEKsil™	1.0 ± 0.1	100 ± 20	7.4	3.08	150 µm	150	250140
G C18 HQ303	C18 HQ	300	3	PEEKsil™	1.0 ± 0.1	100 ± 20	7.4	3.08	150 µm	100	250142
Guard and Trap Columns											
G C8 HQ1003	C8 HQ	1000	3	Glass	0.8 ± 0.1	25 ± 5	0.7	2.33	2.1 mm	10	250019
G C8 HQ1003	C8 HQ	1000	3	PEEKsil™	0.8 ± 0.1	25 ± 5	0.7	2.33	300 µm	10	2222051
G C18 HQ203	C18 HQ	200	3	Glass	1.0 ± 0.1	200 ± 30	12.6	2.63	2.1 mm	10	250021
G C18 HQ203	C18 HQ	200	3	PEEKsil™	1.0 ± 0.1	200 ± 30	12.6	2.63	300 µm	10	2222053
G C18 HQ303	C18 HQ	300	3	Glass	1.0 ± 0.1	100 ± 20	7.4	3.08	2.1 mm	10	250029
G C18 HQ303	C18 HQ	300	3	PEEKsil™	1.0 ± 0.1	100 ± 20	7.4	3.08	300 µm	10	2222054

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