

## Thermo Scientific Columns for Biomolecules (continued)

### B) Ion-Exchange Columns for Proteins (continued)

Figure 21 shows the separation of lysine truncation variants on a ProPac™ WCX-10 column and Figure 22 shows the separation of haemoglobin variants on ProPac SCX-10.

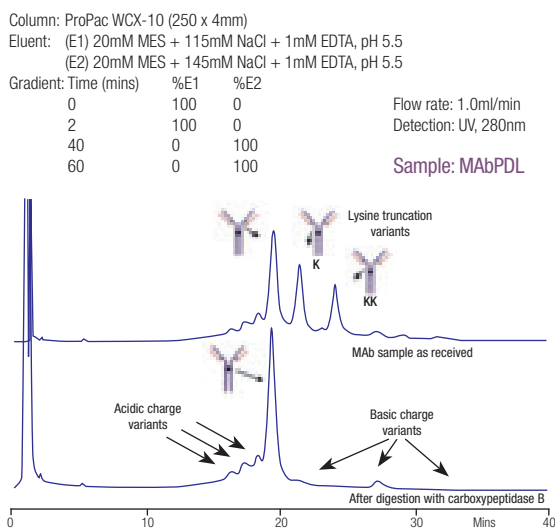


Figure 21. MAb separation on ProPac WCX-10

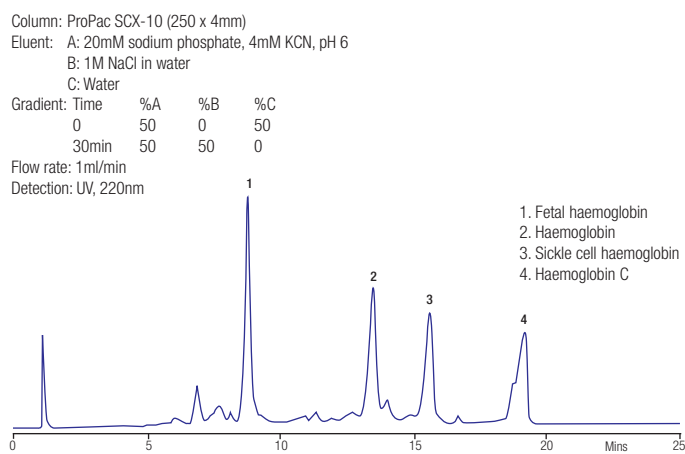


Figure 22. Separation of haemoglobin variants on ProPac SCX-10

### C) Size Exclusion Columns for Proteins

BioBasic™ SEC columns, based on silica with a proprietary polymeric coating, offer the mechanical stability of silica-based size exclusion columns with higher efficiencies than that of polymer-based columns. Four pore sizes are available, making them ideal for molecular weight determination of peptides and proteins and for sample clean-up prior to other analyses.

BioBasic Phase	Particle Size (µm)	Pore Size (Å)	Exclusion Limit (kDa)
SEC 60	5	60	0.1 - 6
SEC 120	5	120	0.1 - 50
SEC 300	5	300	1 - 500
SEC 1000	5	1000	20 - 4000

**MAbPac SEC-1** (300Å, 5µm diol-bonded silica) is a size exclusion column specifically designed for separation and characterisation of monoclonal antibodies and their aggregates, as well as the analysis of Fab and Fc fragments resulting from proteolysis. Please enquire for ordering information.

### D) Hydrophobic Interaction Columns for Proteins

The ProPac HIC-10 column is a high resolution, high capacity, 300Å, 5µm silica based HIC column that provides excellent high resolution separations of proteins and variants for analytical and preparative applications. ProPac HIC columns provide exceptional hydrolytic stability under the highly aqueous conditions used in HIC. Please enquire for ordering information for Hydrophobic Interaction columns.

Phase	ProPac HIC-10
Base material	Porous silica with amide/ethyl surface chemistry
Particle Size (µm)	5
Pore Size (Å)	300
Surface Area (m <sup>2</sup> /g)	100
Capacity	340mg Lysozyme (75 x 7.8mm column)
pH Range	2.5 – 7.5

### E) Affinity Columns for Proteins

#### Affinity Phases

Phase	Base Material	Functional Group	Particle Size (µm)	pH Range	Capacity
ProPac IMAC-10	Non-porous polystyrene-divinylbenzene	Poly(IDA) grafts	10	2 - 12	>60mg lysozyme/ml gel
ProSwift ConA-1S	Polymethacrylate monolith	Concanavalin A ligands	N/A	5 - 8	12-16mg protein

**The ProPac IMAC-10** is a high resolution analytical and semi-preparative column for separation of proteins and peptides by immobilised metal affinity chromatography. It is packed with 10µm non-porous polymeric beads coated with a hydrophilic layer, then grafted with poly(iminodiacetic acid) chains. These grafts are converted to metal-containing nanoparticles when the column is charged with metal ions. Applications include His-tagged proteins, phosphopeptides, prion peptides and proteins.

**The ProSwift® ConA-1S** affinity monolith column is designed for the highly efficient enrichment and purification of Concanavalin A binding glycans, glycopeptides and glycoproteins. It shows high capacity and high sample recovery.

Please enquire for ordering information for affinity columns.

## Thermo Scientific Columns for Biomolecules (continued)

### Ordering Information

#### Reversed-phase and Ion-exchange BioBasic Phases

Column i.d. <sup>1</sup> (mm)	Column Length <sup>1</sup> (mm)				Drop-In Guard Cartridges (4/pk)
	50	100	150	250	
2.1	xxxxx-052130	xxxxx-102130	xxxxx-152130	xxxxx-252130	xxxxx-012101 <sup>2</sup> !
3.0	xxxxx-053030	xxxxx-103030	xxxxx-153030	xxxxx-253030	xxxxx-013001 <sup>2</sup> !
4.6	xxxxx-054630	xxxxx-104630	xxxxx-154630	xxxxx-254630	xxxxx-014001 <sup>3</sup> !

<sup>1</sup> Other dimensions available

<sup>2</sup> Use with Uniguard direct connect holder 852-00

<sup>3</sup> Use with Uniguard direct connect holder 850-00

When ordering please replace 'xxxxx' with the appropriate BioBasic material code.

BioBasic 18 xxxxx=72105 BioBasic 8 xxxxx=72205 BioBasic 4 xxxxx=72305 BioBasic AX xxxxx=73105 BioBasic SCX xxxxx=73205

Please note that not all phases are available in every dimension.

#### Ion Exchange Phases – ProPac and ProSwift

ProPac Phase	Column Dimensions (mm)			
	250 x 2 <sup>1</sup>	250 x 4 <sup>1</sup>	250 x 9	250 x 22
WCX-10	063472	054993	063474	SP5482
SCX-10	063456	054995	063700	SP5522
WAX-10	063464	054999	063707	SP5598
SAX-10	063448	054997	063703	SP5594
MABPac SCX-10 <sup>2</sup>	075604	074625	-	-

<sup>1</sup> Guard columns available

<sup>2</sup> Other dimensions available

Column Dimensions (mm)	ProSwift Phase			
	WCX-1S	SCX-1S	WAX-1S	SAX-1S
50 x 1.0	066643	071977	066642	068459
50 x 4.6	064295	066765	064294	064293

#### Size Exclusion Phases – BioBasic

BioBasic Phase	Column Dimensions (mm)		Guard (30 x 7.8mm)
	150 x 7.8	300 x 7.8	
SEC 60	73305-157846	73305-307846	73305-037821
SEC 120	73405-157846	73405-307846	73405-037821
SEC 300	73505-157846	73505-307846	73505-037821
SEC 1000	73605-157846	73605-307846	73605-037821

#### Columns for Oligonucleotides

DNAPac Phase	Column Dimensions (mm)			
	250 x 2	250 x 4	250 x 9	250 x 22
PA100	SP3686	043010	043011	SP2091
PA200	063425	063000	063421	SP6734