

# TK Europa HPLC Column for Peptides and Proteins



Europa packaging

## Europa C18 Peptide Microbore HPLC Columns



Columns are particularly designed for LC/MS applications. The high detection sensitivity of these columns allows the use of smaller quantities of samples and also decreases the required volume of solvents.

Packing	Funct.	µm	Length		Cat.Nbr.
			cm	Diameter cm	
Europa Peptide 120	C18	5	3	0.21	TR-010130
Europa Peptide 120	C18	5	5	0.21	TR-010131
Europa Peptide 120	C18	5	10	0.21	TR-010132
Europa Peptide 120	C18	5	15	0.21	TR-010133
Europa Peptide 120	C18	5	20	0.21	TR-010134
Europa Peptide 120	C18	5	3	0.30	TR-010135
Europa Peptide 120	C18	5	5	0.30	TR-010136
Europa Peptide 120	C18	5	10	0.30	TR-010137
Europa Peptide 120	C18	5	15	0.30	TR-010138
Europa Peptide 120	C18	5	20	0.30	TR-010139
Europa Peptide 120	C18	5	25	0.30	TR-010140

## Europa C18 Peptide Analytical HPLC Columns



Packing	Funct.	µm	Length		Cat.Nbr.
			cm	Diameter cm	
Europa Peptide 120	C18	5	3	0.46	TR-010116
Europa Peptide 120	C18	5	4	0.46	TR-010117
Europa Peptide 120	C18	5	5	0.46	TR-010118
Europa Peptide 120	C18	5	10	0.46	TR-010119
Europa Peptide 120	C18	5	15	0.46	TR-010120
Europa Peptide 120	C18	5	20	0.46	TR-010121
Europa Peptide 120	C18	5	25	0.46	TR-010122
Europa Peptide 120	C18	5	3	0.40	TR-010123
Europa Peptide 120	C18	5	4	0.40	TR-010124
Europa Peptide 120	C18	5	5	0.40	TR-010125
Europa Peptide 120	C18	5	10	0.40	TR-010126
Europa Peptide 120	C18	5	15	0.40	TR-010127
Europa Peptide 120	C18	5	20	0.40	TR-010128
Europa Peptide 120	C18	5	25	0.40	TR-010129

## Europa C18 Peptide Semi Preparative HPLC Columns



Packing	Funct.	µm	Length		Cat.Nbr.
			cm	Diameter cm	
Europa Peptide 120	C18	5	10	0.78	TR-010141
Europa Peptide 120	C18	5	15	0.78	TR-010142
Europa Peptide 120	C18	5	25	0.78	TR-010143
Europa Peptide 120	C18	5	10	1.00	TR-010144
Europa Peptide 120	C18	5	15	1.00	TR-010145
Europa Peptide 120	C18	5	25	1.00	TR-010146

## Europa C18 Peptide Preparative HPLC Columns



Packing	Funct.	µm	Length		Cat.Nbr.
			cm	Diameter cm	
Europa Peptide 120	C18	5	5	2.12	TR-010147
Europa Peptide 120	C18	5	10	2.12	TR-010148
Europa Peptide 120	C18	5	15	2.12	TR-010149
Europa Peptide 120	C18	5	25	2.12	TR-010150

# Europa HPLC Column for Peptides and Proteins **Tk**

## Europa C18 Protein HPLC Columns

We invite you to try our Europa C18 Protein column when you experience unsatisfactory results with your favorite column.

Europa C18 Protein columns are designed and manufactured for identification and purification of proteins and for compounds with high molecular weight.

Europa HPLC columns for proteins provide a high performance that is unsurpassed in efficiency, reliability and reproducibility. Manufactured using novel proprietary technologies, analytical and preparative Europa columns are simply the best reverse phase columns available today.

Europa columns ensure greater separation efficiency, resistance to extreme pH conditions and longer column life.

Our “Ultra-Fast” columns are made in 3-5 cm length in order to get quick analytical results, whereas the “High Efficiency” columns are normally in 15-25 cm lengths to obtain best resolution.

### Specifications:

- Ultra high purity totally spherical silica gel provide a high resolution and excellent peak shape
- High loading capacity of crude proteins
- High density bonding for extreme performance proprietary fully end-capped silica
- Stable, featuring extended acidic and basic conditions
- Silica properties: ultra pure and totally spherical narrow distribution range and high density
- Fully end-capped silica
- Porous Size: 300Å narrow particle size distribution
- Surface Area 100 m<sup>2</sup>/gr.
- % of Carbon 7 %
- Packed with 5µm sized silica particles
- Available as C4, C8, and C18 columns
- Microbore Columns are available in: 0.21, 0.30 cm I.D.  
Analytical Columns in: 0.40 and 0.46cm I.D. Semi-Prep in: 0.70-1.0cm Prep Columns in: 2.1cm and larger diameter by request

## Europa C18 Protein Preparative HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			µm	cm		
Europa Protein 300	C18	5	5	2.12	2.12	TR-010217
Europa Protein 300	C18	5	10	2.12	2.12	TR-010218
Europa Protein 300	C18	5	15	2.12	2.12	TR-010219
Europa Protein 300	C18	5	25	2.12	2.12	TR-010220

## Europa C18 Protein Analytical HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			µm	cm		
Europa Protein 300	C18	5	3	0.46	0.46	TR-010158
Europa Protein 300	C18	5	4	0.46	0.46	TR-010159
Europa Protein 300	C18	5	5	0.46	0.46	TR-010160
Europa Protein 300	C18	5	10	0.46	0.46	TR-010161
Europa Protein 300	C18	5	15	0.46	0.46	TR-010162
Europa Protein 300	C18	5	20	0.46	0.46	TR-010163
Europa Protein 300	C18	5	25	0.46	0.46	TR-010164
Europa Protein 300	C18	5	3	0.40	0.40	TR-010172
Europa Protein 300	C18	5	4	0.40	0.40	TR-010173
Europa Protein 300	C18	5	5	0.40	0.40	TR-010174
Europa Protein 300	C18	5	10	0.40	0.40	TR-010175
Europa Protein 300	C18	5	15	0.40	0.40	TR-010176
Europa Protein 300	C18	5	20	0.40	0.40	TR-010177
Europa Protein 300	C18	5	25	0.40	0.40	TR-010178

## Europa C18 Protein Microbore HPLC Columns



Columns are particularly designed for LC/MS applications. The high detection sensitivity of these columns allows the use of smaller quantities of samples and also decreases the required volume of solvents.

Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			µm	cm		
Europa Protein 300	C18	5	3	0.21	0.21	TR-010184
Europa Protein 300	C18	5	5	0.21	0.21	TR-010185
Europa Protein 300	C18	5	10	0.21	0.21	TR-010186
Europa Protein 300	C18	5	15	0.21	0.21	TR-010187
Europa Protein 300	C18	5	20	0.21	0.21	TR-010188
Europa Protein 300	C18	5	3	0.30	0.30	TR-010195
Europa Protein 300	C18	5	5	0.30	0.30	TR-010196
Europa Protein 300	C18	5	10	0.30	0.30	TR-010197
Europa Protein 300	C18	5	15	0.30	0.30	TR-010198
Europa Protein 300	C18	5	20	0.30	0.30	TR-010199
Europa Protein 300	C18	5	25	0.30	0.30	TR-010200

## Europa C18 Protein Semi-Preparative HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			µm	cm		
Europa Protein 300	C18	5	10	0.70	0.70	TR-010211
Europa Protein 300	C18	5	5	0.70	0.70	TR-010212
Europa Protein 300	C18	5	25	0.70	0.70	TR-010213
Europa Protein 300	C18	5	10	1.00	1.00	TR-010214
Europa Protein 300	C18	5	15	1.00	1.00	TR-010215
Europa Protein 300	C18	5	25	1.00	1.00	TR-010216

# TK Europa HPLC Column for Peptides and Proteins



Semi preparative and Preparative Europa HPLC Columns

## Europa C8 Protein HPLC Columns

Europa C8 columns are recommended for compounds too strongly retained on C18 Phases.

## Europa C8 Protein Analytical HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C8	5	3	0.46	TR-010151	
Europa Protein 300	C8	5	4	0.46	TR-010152	
Europa Protein 300	C8	5	5	0.46	TR-010153	
Europa Protein 300	C8	5	10	0.46	TR-010154	
Europa Protein 300	C8	5	15	0.46	TR-010155	
Europa Protein 300	C8	5	20	0.46	TR-010156	
Europa Protein 300	C8	5	25	0.46	TR-010157	
Europa Protein 300	C8	5	3	0.40	TR-010165	
Europa Protein 300	C8	5	4	0.40	TR-010166	
Europa Protein 300	C8	5	5	0.40	TR-010167	
Europa Protein 300	C8	5	10	0.40	TR-010168	
Europa Protein 300	C8	5	15	0.40	TR-010169	
Europa Protein 300	C8	5	20	0.40	TR-010170	
Europa Protein 300	C8	5	25	0.40	TR-010171	

## Europa C8 Protein Microbore HPLC Columns



Columns are particularly designed for LC/MS applications. The high detection sensitivity of these columns allows the use of smaller quantities of samples and also decreases the required volume of solvents.

Europa C8 columns are recommended for compounds too strongly retained on C18 Phases.

Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C8	5	3	0.21	TR-010179	
Europa Protein 300	C8	5	5	0.21	TR-010180	
Europa Protein 300	C8	5	10	0.21	TR-010181	
Europa Protein 300	C8	5	15	0.21	TR-010182	
Europa Protein 300	C8	5	20	0.21	TR-010183	
Europa Protein 300	C8	5	3	0.30	TR-010189	

Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C8	5	5	0.30	TR-010190	
Europa Protein 300	C8	5	10	0.30	TR-010191	
Europa Protein 300	C8	5	15	0.30	TR-010192	
Europa Protein 300	C8	5	20	0.30	TR-010193	
Europa Protein 300	C8	5	25	0.30	TR-010194	

## Europa C8 Protein Semi-Preparative HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C8	5	10	0.70	TR-010201	
Europa Protein 300	C8	5	15	0.70	TR-010202	
Europa Protein 300	C8	5	25	0.70	TR-010203	
Europa Protein 300	C8	5	10	1.00	TR-010204	
Europa Protein 300	C8	5	15	1.00	TR-010205	
Europa Protein 300	C8	5	25	1.0	TR-010206	

## Europa C8 Protein Preparative HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C8	5	5	2.12	TR-010207	
Europa Protein 300	C8	5	10	2.12	TR-010208	
Europa Protein 300	C8	5	15	2.12	TR-010209	
Europa Protein 300	C8	5	25	2.12	TR-010210	

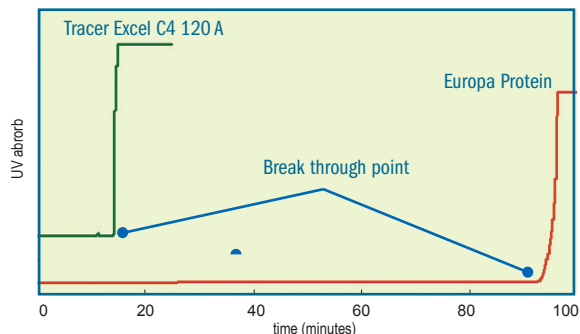
For Guard Columns please refer to pages 209-211

# Europa HPLC Column for Peptides and Proteins **Tk**

## Europa C4 Protein HPLC Columns

### Europa Protein C4 300 A - Loading Capacity of BSA

Protein 300 exhibited the highest loading capacity for proteins

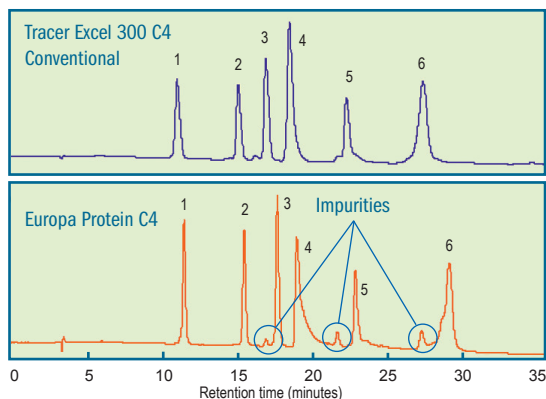


**Column:** 7 mm I.D. x 250 mm Length; Temperature: 35°C; Detector: UV 220 nm;  
**Flow Rate:** 1.0 ml/min.  
**Feed:** 10 mg/mL BSA in 0.1% TFAaq  
 Europa C4 columns are recommended for compounds too strongly retained on C 18 and C 8

### Europa Protein C4 300 A - Protein Separation Behaviors

- **Similar Hydrophobic Selectivity**
- **Higher Resolution**

Protein Standards	
1.	Ribonuclease A (M.W. 13,700)
2.	Cytochrome C (M.W. 12,400)
3.	Lysozyme (M.W. 14,300)
4.	BSA (M.W. 67,000)
5.	Myoglobin (M.W. 18,800)
6.	Ovalbumin (M.W. 45,300)



**Column:** 6 mm I.D. x 250 mm Length; Temperature: 35°C; Detector: UV 220 nm;  
**Mobile Phase:** A) CH<sub>3</sub>CN/H<sub>2</sub>O/TFA = 20/80/0.1, B) CH<sub>3</sub>CN/H<sub>2</sub>O/TFA = 60/40/0.1,  
 Linear Gradient from A to B in 25 min and hold for 10 min; **Flow Rate:** 1.7 ml/min.

### Europa C4 Protein Analytical HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C4	5	3	0.46	TR-010081	
Europa Protein 300	C4	5	4	0.46	TR-010082	
Europa Protein 300	C4	5	5	0.46	TR-010083	
Europa Protein 300	C4	5	10	0.46	TR-010084	
Europa Protein 300	C4	5	15	0.46	TR-010085	
Europa Protein 300	C4	5	20	0.46	TR-010086	
Europa Protein 300	C4	5	25	0.46	TR-010087	

Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C4	5	3	0.40	TR-010088	
Europa Protein 300	C4	5	4	0.40	TR-010089	
Europa Protein 300	C4	5	5	0.40	TR-010090	
Europa Protein 300	C4	5	10	0.40	TR-010091	
Europa Protein 300	C4	5	15	0.40	TR-010092	
Europa Protein 300	C4	5	20	0.40	TR-010093	
Europa Protein 300	C4	5	25	0.40	TR-010094	

### Europa C4 Protein Microbore HPLC Columns



Columns are particularly designed for LC/MS applications. The high detection sensitivity of these columns allows the use of smaller quantities of samples and also decreases the required volume of solvents.

Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C4	5	3	0.21	TR-010095	
Europa Protein 300	C4	5	5	0.21	TR-010096	
Europa Protein 300	C4	5	10	0.21	TR-010097	
Europa Protein 300	C4	5	15	0.21	TR-010098	
Europa Protein 300	C4	5	20	0.21	TR-010099	
Europa Protein 300	C4	5	3	0.30	TR-010100	
Europa Protein 300	C4	5	5	0.30	TR-010101	
Europa Protein 300	C4	5	10	0.30	TR-010102	
Europa Protein 300	C4	5	15	0.30	TR-010103	
Europa Protein 300	C4	5	20	0.30	TR-010104	
Europa Protein 300	C4	5	25	0.30	TR-010105	

### Europa C4 Protein Semi-Preparative HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C4	5	10	0.78	TR-010106	
Europa Protein 300	C4	5	15	0.78	TR-010107	
Europa Protein 300	C4	5	25	0.78	TR-010108	
Europa Protein 300	C4	5	10	1.00	TR-010109	
Europa Protein 300	C4	5	15	1.00	TR-010110	
Europa Protein 300	C4	5	25	1.00	TR-010111	

### Europa C4 Protein Preparative HPLC Columns



Packing	Funct.	µm	Length		Diameter	Cat.Nbr.
			cm	cm		
Europa Protein 300	C4	5	5	2.12	TR-010112	
Europa Protein 300	C4	5	10	2.12	TR-010113	
Europa Protein 300	C4	5	15	2.12	TR-010114	
Europa Protein 300	C4	5	25	2.12	TR-010115	