

## Native and Recombinant Protein Purification Resins/Media Selection Card

Bio-Rad offers a wide range of resins/media for both recombinant and native protein purification at scales ranging from micrograms to kilograms.

Use this card to select the optimal resin/media for your protein purification.



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### Optimal Resins/Media for Native and Recombinant Protein Purification

Property	Process Purification Resin Type						
	Nuvia™ Q	Nuvia S	UNOsphere™ Q	UNOsphere S	Nuvia IMAC	CHT™ Ceramic Hydroxyapatite	Nuvia™ cPrime™
Chromatography type	Anion exchange	Cation exchange	Anion exchange	Cation exchange	Affinity	Mixed-mode (cation exchange and metal affinity)	Mixed-mode (HIC and cation exchange)
Particle size	85 ± 15 µm	85 ± 15 µm	120 µm	80 µm	38–53 µm	20 ± 2, 40 ± 4, 80 ± 8 µm	70 ± 10 µm
Ionic capacity	100–170 µeq/ml	90–150 µeq/ml	120 µeq/ml	269 ± 50 µeq/ml	N/A	—	110–150 µeq/ml
Dynamic binding capacity (DBC)	≥170 mg/ml at 300 cm/hr*	≥110 mg/ml at 300 cm/hr*	≥180 mg BSA/ml at 150 cm/hr* ≥125 mg BSA/ml at 600 cm/hr*	60 mg IgG/ml at 150 cm/hr*	≥40 mg/ml at 300 cm/hr*	≥25 mg lysozyme/g* 25–60 mg IgG/ml at 300 cm/hr*	>40 mg hlgG/ml (at 10% breakthrough) at 300 cm/hr* >60 mg lactoferrin/ml*
Recommended linear flow rate	50–600 cm/hr	50–300 cm/hr	50–300 cm/hr	50–300 cm/hr	50–300 cm/hr	50–300 cm/hr	50–600 cm/hr
pH stability	Short-term: 2–14 Long-term: 4–12	Short-term: 2–14 Long-term: 4–13	1–14	1–14	2–14	6.5–14	Short-term: 3–14 Long-term: 4–13

Property	Process Purification Resin Type					
	Macro-Prep® Methyl	Macro-Prep t-Butyl	Macro-Prep High Q	Macro-Prep High S	Macro-Prep CM	Macro-Prep DEAE
Chromatography type	HIC	HIC	Anion exchange	Cation exchange	Cation exchange	Anion exchange
Particle size	50 µm	50 µm	50 µm	50 µm	50 µm	50 µm
Ionic capacity	<2 µeq/ml	120 µeq/ml	400 ± 75 µeq/ml	160 ± 40 µeq/ml	210 ± 40 µeq/ml	175 ± 75 µeq/ml
Dynamic binding capacity (DBC)	15 mg HSA/ml*	25 mg HSA/ml*	≥37 mg BSA/ml*	>49 mg hlgG/ml*	≥25 mg hemoglobin/ml*	≥30 mg BSA/ml*
Recommended linear flow rate	100–600 cm/hr	100–600 cm/hr	50–300 cm/hr	50–300 cm/hr	50–300 cm/hr	50–300 cm/hr
pH stability	1–10	1–10	1–10**	1–10**	1–12	1–10

BSA bovine serum albumin; HIC, hydrophobic interaction chromatography; hlgG, human IgG; HSA, human serum albumin.

\* Go to the product detail page or [bulletin 6713](#) on [bio-rad.com](http://bio-rad.com) to see how the DBC was determined and for other technical details.

\*\* The use of basic reagents greater than pH 10 should be evaluated for each application.

### Ordering Information

Nuvia Q	Catalog #	Size	Nuvia S	Catalog #	Size	UNOsphere Q	Catalog #	Size
Foresight™ Nuvia Q Plates	732-4703	2 x 96-well, 20 µl	Foresight Nuvia S Plates	732-4701	2 x 96-well, 20 µl	Foresight UNOsphere Q Plates	732-4714	2 x 96-well, 20 µl
Foresight Nuvia Q RoboColumn Unit	732-4804 732-4805	200 µl 600 µl	Foresight Nuvia S RoboColumn Unit	732-4801 732-4802	200 µl 600 µl	Foresight UNOsphere Q RoboColumn Unit	732-4819 732-4820	200 µl 600 µl
Foresight Nuvia Q Column	732-4721 732-4741	1 x 1 ml 1 x 5 ml	Foresight Nuvia S Column	732-4720 732-4740	1 x 1 ml 1 x 5 ml	Foresight UNOsphere Q Column	732-4732 732-4752	1 ml 5 ml
Nuvia Q Resin	1560411 1560413 156-0415 156-0417	25 ml 100 ml 500 ml 10 L	Nuvia S Resin	1560311 1560313 156-0315 156-0317	25 ml 100 ml 500 ml 10 L	UNOsphere Q Resin	1560101 1560103 156-0105 156-0107	25 ml 100 ml 500 ml 10 L

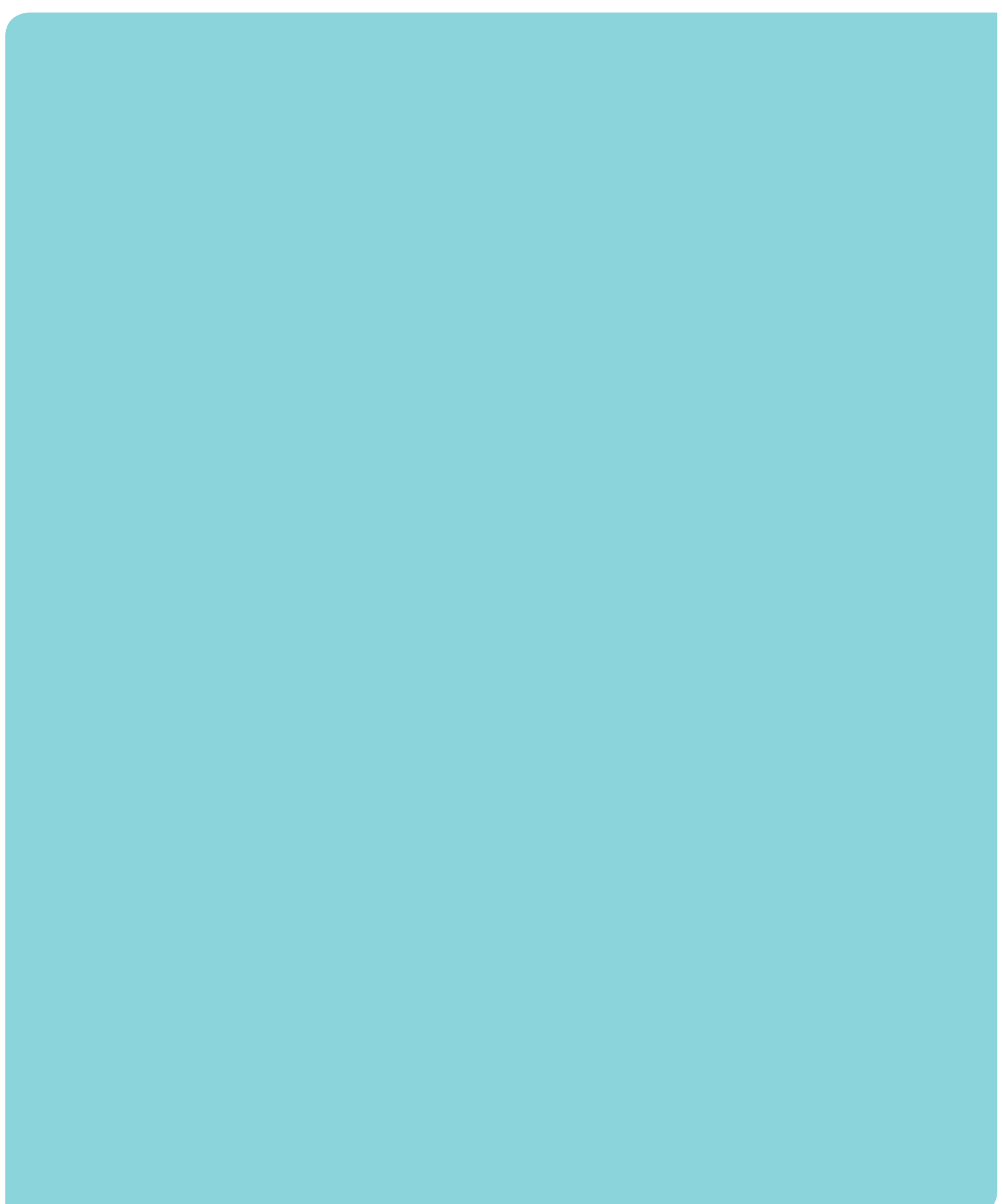
UNOsphere S	Catalog #	Size	Nuvia IMAC	Catalog #	Size	Nuvia cPrime	Catalog #	Size
Foresight UNOsphere S Plates	732-4710	2 x 96-well, 20 µl	Bio-Scale™ Mini Nuvia IMAC Cartridges	7800811 7800812	1 x 5 ml 5 x 5 ml	Foresight Nuvia cPrime Plates	732-4705	2 x 96-well, 20 µl
Foresight UNOsphere S RoboColumn Unit	732-4813 732-4814	200 µl 600 µl	Nuvia IMAC Resin	7800800 7800801 780-0802	25 ml 100 ml 500 ml	Foresight Nuvia cPrime RoboColumn Unit	732-4807 732-4808	200 µl 600 µl
Foresight UNOsphere S Column	732-4730 732-4750	1 ml 5 ml		12003233 12002782	5 L 10 L	Foresight Nuvia cPrime Column	732-4722 732-4742	1 ml 5 ml
UNOsphere S Resin	1560111 1560113 156-0115 156-0117	25 ml 100 ml 500 ml 10 L				Nuvia cPrime Resin	1563401 1563402 156-3403 156-3404 156-3405 156-3406	25 ml 100 ml 500 ml 1 L 5 L 10 L

Macro-Prep Methyl	Catalog #	Size	Macro-Prep t-Butyl	Catalog #	Size	Macro-Prep CM	Catalog #	Size
Macro-Prep Methyl HIC Resin	1580080 1560080 156-0081 156-0082 156-0083	25 ml 100 ml 500 ml 5 L 10 L	Macro-Prep t-Butyl HIC Resin	1580090 1560090 156-0091 156-0093	25 ml 100 ml 500 ml 10 L	Macro-Prep CM Resin	1580070 1560070 156-0071 156-0073	25 ml 100 ml 500 ml 10 L

## Ordering Information

CHT Ceramic Hydroxyapatite			Macro-Prep High Q			Macro-Prep High S		
Catalog #	Size		Catalog #	Size		Catalog #	Size	
Foresight CHT Type I Plates	732-4716	40 µm, 2 x 96-well, 20 µl	Bio-Scale Mini Macro-Prep High Q Cartridges	7324120	5 x 1 ml	Bio-Scale Mini Macro-Prep High S Cartridges	7324130	5 x 1 ml
Foresight CHT Type II Plates	732-4718	40 µm, 2 x 96-well, 20 µl		7324122	1 x 5 ml		7324132	1 x 5 ml
				7324124	5 x 5 ml		7324134	5 x 5 ml
Foresight CHT Type I RoboColumn Unit	732-4822	40 µm, 200 µl	Macro-Prep High Q Resin	1580040	25 ml	Macro-Prep High S Resin	1580030	25 ml
Foresight CHT Type II RoboColumn Unit	732-4823	40 µm, 600 µl		1560040	100 ml		1560030	100 ml
	732-4825	40 µm, 200 µl		156-0041	500 ml		156-0031	500 ml
	732-4826	40 µm, 600 µl		156-0042	5 L		156-0032	5 L
Foresight CHT Type I Column	732-4735	40 µm, 1 ml		156-0043	10 L		156-0033	10 L
	732-4755	40 µm, 5 ml					156-0034	50 L
Foresight CHT Type II Column	732-4736	40 µm, 1 ml						
	732-4756	40 µm, 5 ml						
CHT Type I Media, 40 µm	1584000	10 g	<b>Macro-Prep DEAE</b>	<b>Catalog #</b>	<b>Size</b>			
	1570040	100 g	Bio-Scale Mini	7324140	5 x 1 ml			
	157-0041	1 kg	Macro-Prep DEAE Cartridges	7324142	1 x 5 ml			
	157-0045	5 kg		7324144	5 x 5 ml			
CHT Type I Media, 80 µm	1588000	10 g	Macro-Prep DEAE Resin	1580020	25 ml			
	1570080	100 g		1560020	100 ml			
	157-0081	1 kg		156-0021	500 ml			
	157-0085	5 kg		156-0022	5 L			
CHT Type II Media, 40 µm	1584200	10 g		156-0023	10 L			
	1574000	100 g						
	157-4100	1 kg						
	157-4500	5 kg						
CHT Type II Media, 80 µm	1588200	10 g						
	1578000	100 g						
	157-8100	1 kg						
	157-8500	5 kg						

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