

# CaptureSelect™ C-tag: A true selective purification platform for C-terminal tagged proteins



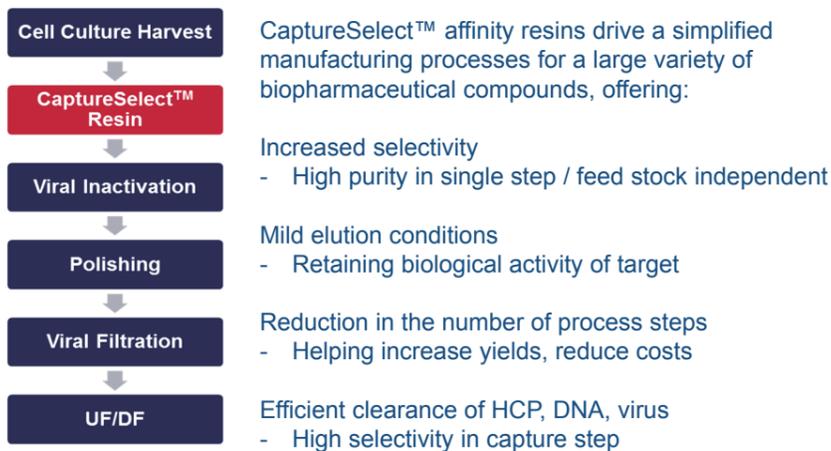
Frank Detmers, Remko Clasen, Ingeborg van Gemeren, Life Technologies, 5791 Van Allen Way, Carlsbad, CA, 92008

## CaptureSelect™ Product Overview

CaptureSelect™ purification and affinity separation products are developed for the discovery and manufacturing of therapeutic proteins, including antibodies and antibody fragments. These products enable a reduced time to market, increased purity and yield and an overall lower cost of goods for biopharmaceutical development.

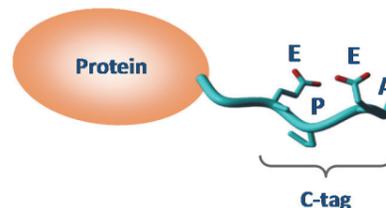
## Technology Platform

CaptureSelect™ technology presents a unique platform for development of product and process specific affinity solutions.



## Targeting a 4 residue C-tag: E-P-E-A

The "CaptureSelect C-tag" affinity matrix provides excellent selectivity for an inert 4 residue peptide sequence fused at the C-terminus of proteins:



	Linker	C-tag	MW (kDa)
- Protein C-term	- no linker	- EPEA	0.44
- Protein C-term	- GAA	- EPEA	0.66
- Protein C-term	- GYQDY	- EPEA	1.07

### Binding Conditions:

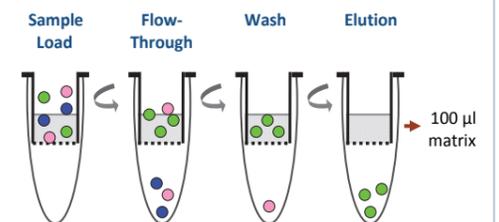
- Physiological:**
  - pH range 6 - 8, NaCl up to 150 mM
- Denaturing:**
  - 50 mM Tris, up to 8 M Urea, pH 7
  - 50 mM Tris, up to 1 M Guanidine, pH 7

### Elution Conditions:

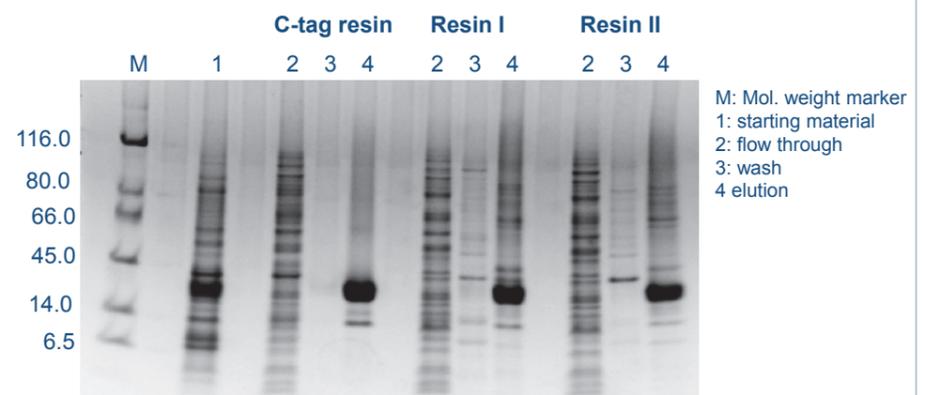
- Neutral:**
  - 20 mM Tris, 2 M MgCl<sub>2</sub>, pH 7
  - 20 mM Tris, 1 M NaCl, 50% (v/v) propylene glycol (PG), pH 7
  - 20 mM Tris, 2 mM "S-E-P-E-A" peptide, ± NaCl, pH 7
- Acidic:**
  - 20 mM citric acid, pH 3
  - 100 mM glycine, pH 3

## Protein C-tag purification: High Throughput > Spin Columns

- Easy to process:
- crude samples: *high selectivity*
  - binding under denaturing conditions: *on column re-folding*
  - mild elution conditions: *retain activity*
  - rigid backbone: *automation compatible*

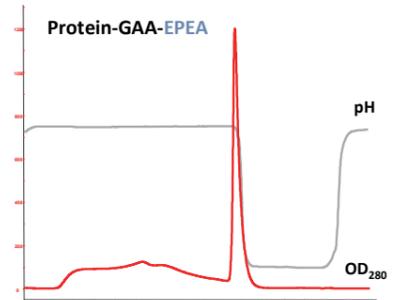


Purification of His –EPEA tagged protein from *E.coli* periplasmic fraction: C-tag outperforming two different Ni-NTA resins



## Good binding capacities at high flow rates:

- Example (Åkta Explorer system):
- Column: 400 µl CaptureSelect C-tag affinity matrix packed in a Tricorn column (2 cm bed height).
  - Sample: 4 ml 0.5 mg/ml Protein-GAA-EPEA fusion in PBS
  - Load: 4 ml sample at 150 cm/hr
  - Running buffer: PBS at 150 cm/hr
  - Elution: 100 mM glycine pH 3.0 at 300 cm/hr

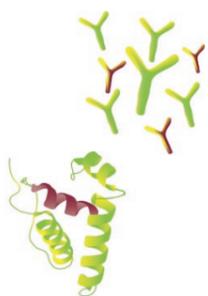
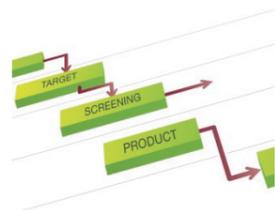


## Product Portfolio Range



Unique products for the highly efficient direct capture purification of various biomolecules such as antibodies and antibody fragments, fusion proteins (Fc and albumin) and biosimilar hormones.

Custom service for the development of product and process specific affinity solutions.

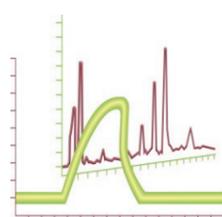


Ready-to-use resins suitable for small scale purification

- **Antibody Toolbox:** purify any antibody format from any species using our diverse product portfolio
- **Protein Purification:** one-step solution for the purification of non-antibody biopharmaceuticals
- **C-tag:** smallest affinity tag system (4 amino acid recognition) available on the market, offering high selectivity, affinity and a variety of elution conditions.

Companion products for further characterization and quantitation of biomolecules

- **HPLC columns:** Prepacked POROS® CaptureSelect™ Affinity Columns for fast and easy quantitation.
- **Ligand Conjugates:** Biotinylated CaptureSelect™ ligands for use in analytical assays, including Western blot and label-free systems.



[lifetechnologies.com/captureselect](http://lifetechnologies.com/captureselect)

## CaptureSelect® C-tag Products

CaptureSelect	Product code	Size
C-tag affinity matrix	193307005	5 ml affinity matrix
C-tag affinity matrix	193307010	10 ml affinity matrix
C-tag affinity matrix	193307050	50 ml affinity matrix
Biotin anti-C-tag conjugate	7103252100	100 µg ligand
Biotin anti-C-tag conjugate	7103252500	500 µg ligand

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