

# CaptureSelect™ Technology: Introducing One-Step Selectivity in the Purification of Biological Products



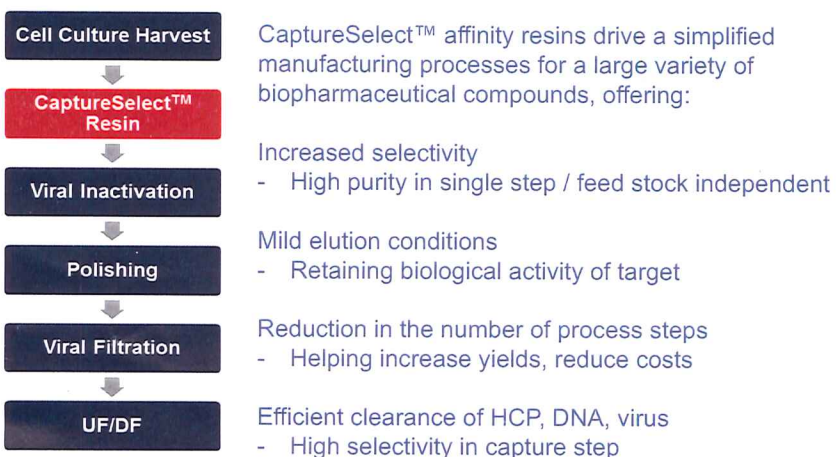
Bruce Dawson, Pim Hermans, and Frank Detmers, Life Technologies, 5791 Van Allen Way, Carlsbad, CA, 92008

## 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.

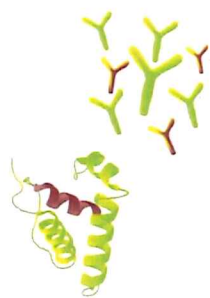
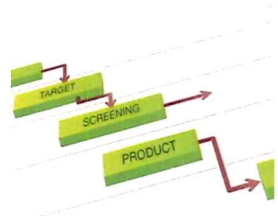


## Product Portfolio Range



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.

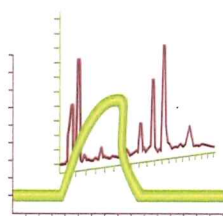


Ready-to-use resins suitable for small scale purification

- **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

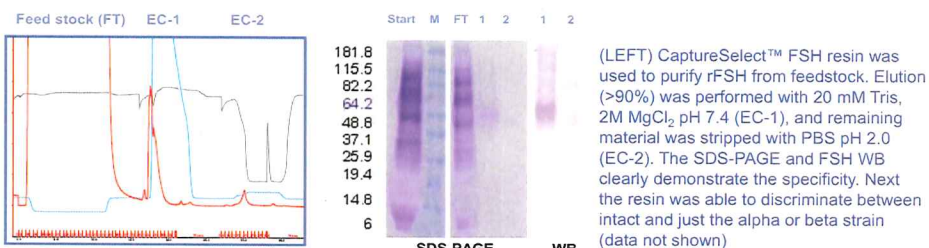
- **HPLC columns:** Prepacked POROS® CaptureSelect™ Affinity Columns for fast and easy quantitation.
- **Ligand Conjugates:** Biotinylated CaptureSelect™ ligands for use in analytical assays, including Western blot and label-free systems.



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

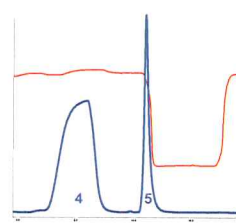
## Platform for Purification of Biologicals

**CaptureSelect™ FSH Affinity Resin** recognizes only intact Follicle Stimulating Hormone, offering the possibility for a one-step capture with high yield and purity.



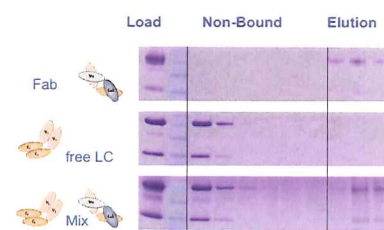
CaptureSelect™ Affinity Resins: purification of human Fab fragments

**anti LC-kappa**  
- high purity in one step



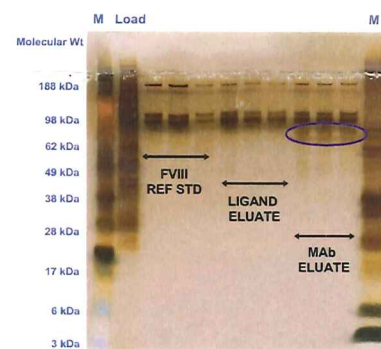
M: BenchMark Protein ladder  
2: Peri fraction of *E.coli*  
4: Flow through fraction

**anti IgG-CH1**  
- no interference of free light chains



- Separation of intact human IgG Fab fragments from free light chains present in feed stock materials

VIIISelect is a resin designed for the production of recombinant b-domain deleted **Factor VIII**. VIIISelect allows for a simple purification of Factor VIII from mammalian feedstock with high yield and attained activity.



(RIGHT) Silver chain gel showing that the eluate using VIIISelect (lanes 6-8) is comparable to the reference standard and that HCP's present in an intermediate step (lanes 9-11) are removed.

VIIISelect is marketed and sold by GE Healthcare.

## Pipeline of Affinity Products

Life Technologies has developed a large number of products (in various stages of development) for applications ranging from detection to bench scale purification, all the way up to cGMP manufacturing of biological products.

CaptureSelect™ Affinity Products for Purification of:

	Therapeutic proteins (non-mAb)	Antibody Types	Vaccines & Viruses
<b>Stage 5:</b> Candidates	Antithrombin III Fibrinogen Transferrin Von Willebrand Factor ApoA	IgA Improved IgG-Fc	
<b>Stage 4:</b> Lead Selection	Prothrombin Exotoxin A (PE)	IgG-CH2	Rotavirus
<b>Stage 3:</b> Matrix Testing	Insulin ApoH	VH3 Free LC-kappa	
<b>Stage 2:</b> Library Screening	C1-Inhibitor Interferon alpha/beta, hIL2 GM-CSF, hCG, Protein C FV, FX, FXI, FXII, FXIII, FH	Free LC-lambda	
<b>Stage 1:</b> Immunization	tPA		

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