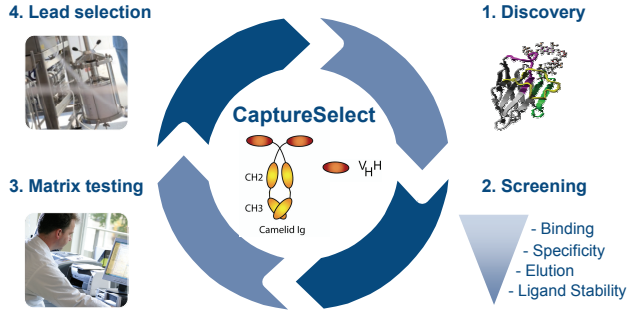
CaptureSelect® - Introducing: New Protein Purification Products

BAC – The Affinity Experts

BAC BV discovers, develops and manufactures affinity ligands and affinity purification products serving the growing market of biopharmaceutical research and production.

CaptureSelect® Technology Platform

BAC has developed a unique platform for development of product and process specific affinity solutions. The custom ligand design process consists of the following stages:



CaptureSelect Product Range

Antibody Toolbox

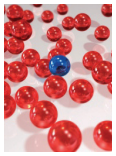
Products for antibody and antibody fragment purification

Protein Purification

Unique resin collections offering a one-step solution for biopharma-ceutical purification

Proteomics Toolbox

Single-step protein depletion enabling biomarker discovery and clinical diagnostics sample preparation



Leakage ELISAs

Assays for determining potential ligand leakage Supporting our resins suitable for cGMP manufacturing

HPLC

CaptureSelect ligands, on Life Technologies' POROS media, in pre-packed columns for analytical applications

Ligand Conjugates

A selection of Capture-Select ligands has been chemically conjugated to biotin for use in analytical assays

Bioprocess

Bioprocess media –CaptureSelect for use in large scale manufacturing of biopharmaceuticals, available from GE-Healthcare, including Regulatory Support Files.

- Examples include products for purification of: Factor VIII, AAT, AAV, hIgG, Antibody fragments, Factor VII, Factor IX

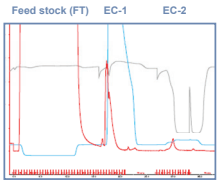
Custom Ligand Design

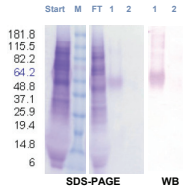
Service for developing product specific affinity solutions

- Proven track record for all major biopharmaceuticals, including biosimilars and vaccines

Examples Protein Purification

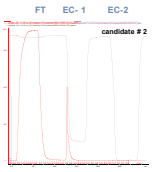
Current purification of **Follicle Stimulating Hormone (FSH)** require multiple non-specific chromatography steps, resulting in low yields. BAC has developed an affinity resin purifying only the intact FSH offering the possibility for a one-step capture with high yield and purity.

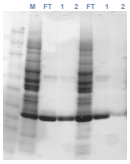




(LEFT) FSH specific resin was used to purify rFSH from feedstock. Elution (>90%) was performed with 20 mM Tris, 2M MgCl2 pH 7.4 (EC-1), and remaining material was stripped with PBS pH 2.0 (EC-2). The SDS-PAGE and FSH WB clearly demonstrate the specificity. Next the resin was able to discriminate between intact and just the alpha or beta strain (data not shown)

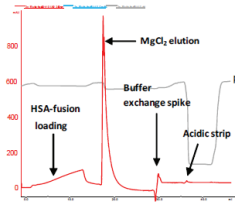
BAC developed an affinity resin for one-step purification of **human Growth Hormone (hGH)**.





(RIGHT) hGH specific resin was used to purify hGH from feedstock. Elution was performed with 20 mM Citric Acid pH 3 (EC-1), and remaining material was stripped with PBS pH 2.0 (EC-2). The gel on the right shows data from 2 prototype resins where candidate 2 showed over 95% elution efficiency.

BAC has developed an affinity resin for the separation of human albumin (-fusion) proteins. This novel product, **CaptureSelect Human Albumin**, is highly selective, unique in its ability to elute under several mild elution conditions, and has a high capacity. The product can be ordered directly from BAC's web shop.



(ABOVE) The CaptureSelect Human Albumin affinity resin was used to purify an albumin fusion protein from cell culture medium. The feedstock was loaded on a 1 ml column with a flow of 150 cm/h, elution was performed with 20 mM Tris, 2M MgCl2 pH 7.4, and stripped with PBS pH 2.0.

Protein Purification Products

CaptureSelect®	Product Code	Applications
Alpha-1 Antitrypein (AAT)	191.2870	Suitable for plasma derived and recombinant AAT
Antithrombin III (ATIII)	190.3170	Purifies both Alpha as well as Beta ATIII
Fibrinogen (Fib)	191.2910	Suitable for plasma derived and recombinant Fibrinogen
Follicle Stimulating Hormone (FSH)	190.3180	Purifies intact FSH
Human Albumin (HSA)	191.2970	Specific for human serum albumin, suitable for excipient grade HSA and HSA-fusion proteins
Human Growth Hormone (hGH)	190.3160	Suitable for both CHO and as well as *E.coli* derived hGH
Transferrin (TF)	191.3060	Suitable for plasma derived and recombinant Transferrin
von Willebrand Factor (vWF)	190.3190	Suitable for plasma derived and transgenic applications. Both the monomer as well as multimers are bound in the presence as well as absence of Factor VIII

Other products that are currently in development include affi nity resins for production of the following biological compounds:

IFN-alpha, IFN-beta, EPO, tPA, PTH, GM-CSF, Insulin, Pro-Thrombin, and others. Please contact BAC for updates on timings.

 www.bacbv.com / www.captureselect.com

Contact: bruce.dawson@bac.nl