

SMART Chromatography[™]

purification from cell containing feed streams in packed bed columns

SMART Chromatography™ is one of the most exciting developments in protein purification. SMART Chromatography™ allows the purification of biomolecules directly from the bioreactor without first having to clarify the feed stream.

> excellence made possible

SMART Chromatography[™]

Purification from cell containing feed streams in packed bed columns

Particle-based biomolecule separation is a well-established technique and has been used successfully for many years. However, preparation of the feed stream is a time-consuming and costly step and the problems associated with this only increase as the bioreactor volume increases in scale. Cell removal steps also result in lower recovery of the desired biomolecule, thus increasing the overall cost of the production process.

As the primary step in a purification process, **SMART Chromatography™** eliminates the requirement to remove cells before application to the chromatography column, reducing the number of steps in the process, reducing time and increasing product recovery.

SMART Chromatography[™] uses proprietary ZetaCell solid phases. These are based on large-particle highly cross-linked agarose, which is surface-modified to provide the desired binding functionality. The beads have been designed to allow cells and cell debris from the bioreactor to pass unhindered through the packed column bed.

All **SMART Chromatography™** and **ZetaCell** products are manufactured in dedicated ISO certified facilities under strict control and according to the highest of internationally recognized quality standards. **Resin name**

ZetaCell SP

ZetaCell SP Boost

ZetaCell CM

ZetaCell CM Boost

ZetaCell Q

ZetaCell Q Boost

ZetaCell DEAE

ZetaCell DEAE Boost

ZetaCell Aldehyde activated

ZetaCell Protein G

ZetaCell NTA (metal-free)

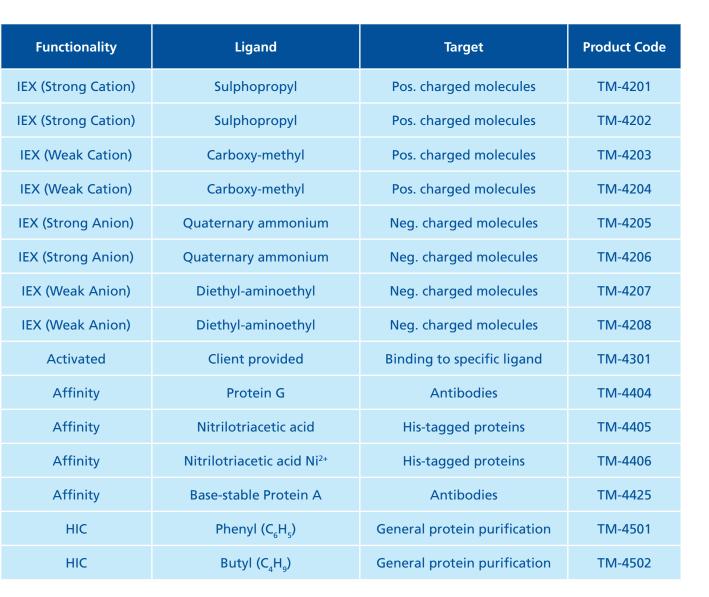
ZetaCell Ni-NTA

ZetaCell Protein A Resolute

ZetaCell Phenyl

ZetaCell Butyl

For more information, please contact us at smart@empbiotech.com or +49 30 9489 2201



SMART Chromatography™ columns are supplied pre-packed and ready-to-use. For larger columns please contact us.

emp BIOTECH is also pleased to supply you with fully customized solutions designed specifically for your application. Please contact us for a consultation.

SMART Chromatography[™] has been successfully used for a wide range of primary protein purification procedures and from a variety of secretion and non-secretion cell systems, including mammalian cell lines (CHO-cell line), bacteria (*E. coli*), yeast (*S. cerevisiae*, *P. pastoris*) as well as rice flour.

Studies in filamentous funghi, plant and moss cell cultures are currently under evaluation.

For more information, please contact us at smart@empbiotech.com or +49 30 9489 2201

emp BIOTECH GmbH Robert-Rössle-Str. 10 13125 Berlin · Germany Tel. +49 (0)30 94 89 22 01

emp BIOTECH LLC 1001 Route 9 North, Suite 201 Howell, NJ 07731 · USA Tel. +1 732-409-2600

info@empbiotech.com

09.2021

emp BIOTECH is an ISO 9001:2015 certified company Registration number 011001300789 (TÜV Rheinland)

www.empbiotech.com