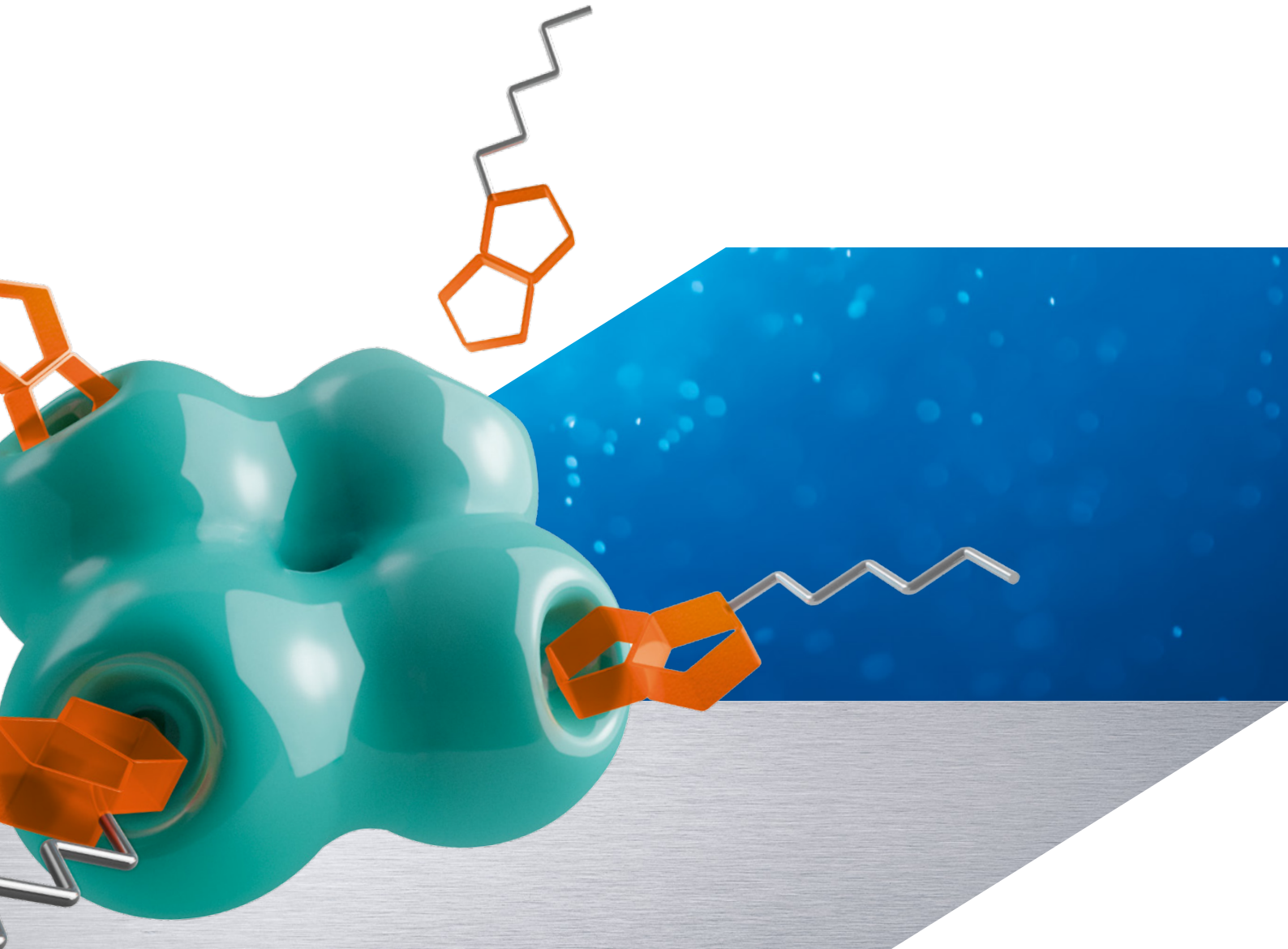


Streptavidin/Biotin System
for the Diagnostics Industry



Benefit from the pioneers' expertise

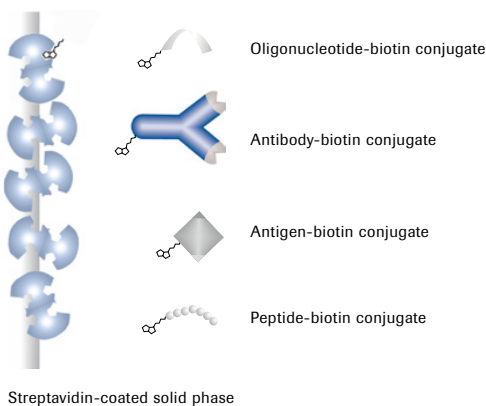
Manufacturing excellence sets industry standards

Streptavidin/Biotin applications

Streptavidin is a core component of countless immunoassays to label or immobilize analytes. Recombinant Streptavidin is a suitable tool for enabling universal test systems in immunology and molecular diagnostics. Stringent quality control processes ensure high biotin affinity and robustness to pH variation, detergents, and ionic strength. In addition, streptavidin-biotin's low nonspecific interactions improve signal-to-noise ratio.

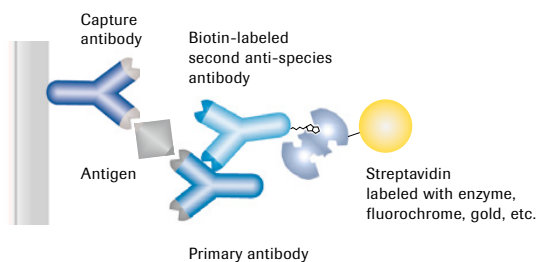
Solid phase technology

Recombinant Streptavidin is suited for coating solid phases, such as microplates, beads, and microarrays.



Universal detection systems

Due to its universal concept, the streptavidin/biotin system can be applied to various detection systems, including microscopy, electron, light, and fluorescence microscopy, cytofluorography, and photometry.



Roche sets industry standards with recombinant streptavidin

Roche CustomBiotech pioneered the development of recombinant streptavidin and is now one of the world's largest manufacturers of this protein. We continue to set industry standards through meaningful product innovation. For example, Streptavidin Mutein Sepharose includes a targeted mutation that makes streptavidin-biotin binding reversible, enabling purification of biotinylated compounds with high recovery and purity.

Recombinant Streptavidin from *Streptomyces avidinii*, expressed in *E. coli*:

- High biotin-binding capacity (≥ 17 U/mg protein)
- Protease-free (≤ 0.001 U/mg)

Streptavidin Mutein Sepharose

The Sepharose matrix provides a recombinant Streptavidin Mutein with reduced binding affinity to biotin immobilized onto cross-linked agarose beads in a highly stable form.

Streptavidin products characteristics

	Streptavidin, recombinant	Streptavidin Mutein Sepharose
Catalog number	11 520 679 103	03 314 731 103
Pack size	custom fill	0.2 l (bulk); 10 ml (samples)
Molecular weight	≥52.000	≥52.000
Biotin binding capacity	Streptavidin + 4 biotin streptavidin (biotin) ₄ The formation of the complex is measured at 233 nm	Streptavidin + 4 biotin streptavidin (biotin) ₄ The formation of the complex is measured at 233 nm
pH stability	5.0 – 9.0	
Working solution	10 mg lyophilizate / ml water	agarose gel suspension (50%), ready to use
K _D	10 ⁻¹⁵ mol/l	10 ⁻⁹ mol/l

Biotinylating reagents

Ideally, the Streptavidin solutions shown above are combined with Roche CustomBiotech Biotin products. Activated Biotin esters are suitable for chemical coupling reactions with amino groups. If needed, an amino caproic acid spacer minimizes steric hindrance in coupled biotinylated macromolecules.

	Biotin-O-Su	Biotin-X-OSu
Catalog number	10 734 250 103	11 003 933 103
Pack size	custom fill	custom fill
Nomenclature	d-Biotin-N-hydroxysuccinimide ester	D-biotinoyl-ε-aminocaproic acid-N-hydroxysuccinimide ester
Formula	C ₁₄ H ₁₉ N ₃ O ₅ S	C ₂₀ H ₃₀ N ₄ O ₆ S
CAS	35013-72-0	72040-63-2

Interference elimination of antibodies to Streptavidin

As a specific blocker for antibody-based Streptavidin directed interferences derived from patient sera, the Streptavidin rec. inactive, poly can be easily integrated into your immunoassay reagents. Test accuracy and overall kit performance are improved.

Product	Pack size	Catalog number
Streptavidin rec. inactive, poly	custom fill and / or defined pack sizes: 400 mg, 2000 mg	11 922 122 103

Streptavidin R-Phycoerythrin conjugates for ultrasensitive detection

Conjugated reporter dyes such as Streptavidin R-Phycoerythrin are well established for Luminex® xMAP® Assay Kits or array-based applications due to their proven spectral characteristics. Their dedicated and reproducible design ensures high performance multiplex assays using antibodies, receptors, peptides, and oligonucleotides.

	Streptavidin R-Phycoerythrin LumiGrade Ultrasensitive Reagent	Streptavidin R-Phycoerythrin Phycoerythrin LumiGrade Reagent
Catalog number	05 351 693 103	05 065 925 103
Pack size	custom fill	custom fill
Appearance	Reddish solution (c =1 mg/ml) in potassium phosphate, 50 mmol/l; pH 6.8, sodium azide, 0.05%	Reddish solution (c =1 mg/ml) in potassium phosphate, 50 mmol/l; pH 6.8, sodium azide, 0.05%

Regulatory disclaimer

For further processing only.

Trademarks

Luminex and xMAP are registered trademarks of Luminex Corporation.

custombiotech.roche.com

Please contact your local CustomBiotech representative

Europe, Middle East, Africa, Latin America

Phone +49 621 759 8580
Fax +49 621 759 6385
mannheim.custombiotech@roche.com

United States

Phone +1 800 428 5433, ext. 14649 (toll-free)
Fax +1 317 521 4065
custombiotech.ussales@roche.com

Canada

Phone +1 450 686 7050
Fax +1 450 686 7012
custombiotech.can@roche.com

Japan

Phone +81 3 5443 5285
Fax +81 3 5443 7934
japan.custombiotech@roche.com

Asia Pacific

Phone +65 6371 6638
Fax +65 6371 6601
apac.custombiotech@roche.com

Published by

Roche Diagnostics GmbH
Sandhofer Straße 116
68305 Mannheim
Germany

© 2016 Roche Diagnostics GmbH
All rights reserved.