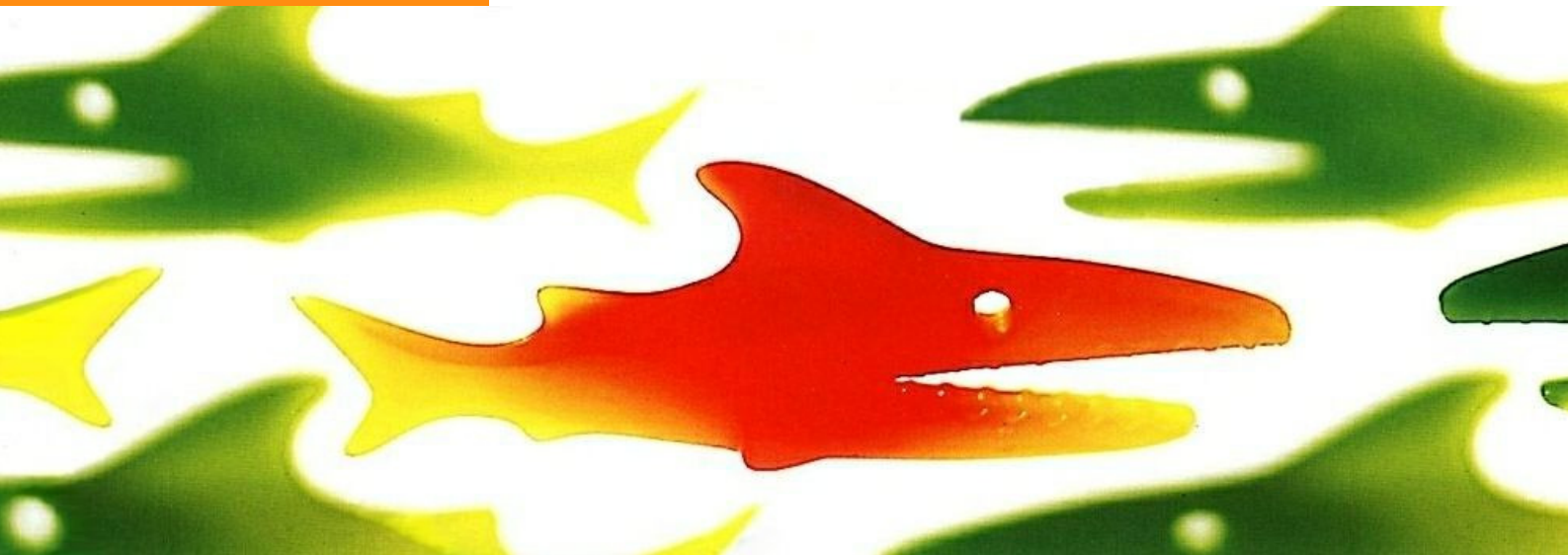


Catalogue 2012/13



GENAXXON
b i o s c i e n c e



2012/13

www.genaxxon.com
info@genaxxon.com

YOUR PARTNER IN BIOSCIENCE
WE ARE DIFFERENT

PRODUCTS AND SERVICES

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welcome



Products - Kits, reagents, buffers, solvents? **Genaxxon bioscience** provides you with everything you need. Some of our highlights are: DNA polymerases (hotstart - proof-reading) · cloning kits · ultra fast ligation kit · competent cells for toxic fragments · Real-Time PCR Master Mixes and consumables · polycarbonate capillaries for use in Roche LightCycler® · special agaroses · buffers · ready-to-use buffers · etc...

Services - **Genaxxon bioscience** offers a broad range of services: · peptide synthesis · protein sequencing · pyrosequencing · MGMT-CpG analysis · qPCR analysis · cloning and expression in *E.coli* and yeast · etc...

And much more... Life science is a fast moving and highly competitive field. To keep pace with this developments - we are different.

To enable our customers a straight forward access to **Genaxxon bioscience** latest products and services, we have build up a state-of-the-art online ship where customers can get information about our more than 4000 products and services.

Come in and find out

www.genaxxon.com

The Company - **Genaxxon bioscience** has been formed in April 2002 by molecular biologists and biochemists. Their combined scientific knowledge, lab experience, and knowledge about sourcing of products enables Genaxxon bioscience to identify, to source, to develop and finally produce a broad range of molecular biology and cell biology reagents.

The idea - Our aim is to provide our customers with a range of molecular biology and cell biology products and custom services for their daily work in the most effective way and the highest quality possible. To reach this goal we are not only performing a quality check of all our products but we are also listening to our customers feed-back trying to implement their suggestions into our developments

II. Services

Product Overview

Peptide Synthesis

Peptide Synthesis Service
Lipopeptides, Siderophores

Protein Purification

Affinity Protein Purification
IEF-, SDS-gel electrophoresis

Protein Labelling

Cell Line Service

Cell Cultivation, Cell Production and Processing
Production of Adherent Cells, Stability Check

Protein Analysis

Amino Acid Analysis, Protein Sequencing, MALDI-TOF

Cytobox™

Cloning and Expression

cDNA Cloning, Library Construction, Plasmid
Preparation
E.coli, Baculo, Insect Cells

Recombinant Protein Production in Human HEK293 Cells

Polyclonal Antibody Services

Product Overview

Peptide Synthesis

Peptide Synthesis Service

General overview

Genaxxon bioscience offers peptide synthesis for peptides of different amounts (from 1mg up to 100mg) and purities (55% up to 95%). If you are interested in getting the price for a peptide of your demand, please contact Genaxxon bioscience at info@genaxxon.com. We will make you an offer, as fast as possible. For being able to make a valid quotation, we do need the amino acid sequence, the purity and the amount you are looking for. Genaxxon bioscience is also able to synthesize peptides with modifications or including non-natural amino acids or other chemical substitutions.

Genaxxon bioscience offers also peptides from stock, as lipopeptides and siderophores.

The use of Fmoc chemistry on multiple reaction vessel synthesizers allows us to take full advantage of peptide cleavage and deprotection. Therefore, we can offer a rapid delivery of peptides synthesized using mixed anhydride or active ester coupling chemistries. A Quality Control is performed on each synthesized peptide by RP-HPLC and MALDI-TOF Mass Spectroscopy. Both, the HPLC chromatogram as well as the MS-spectrum are supplied with the synthesized peptide. To reach different purity levels, peptides are routinely purified by repetitive preparative RP-HPLC, although other strategies are also available. Contact us for more information at info@genaxxon.com.

Purity levels

Genaxxon bioscience offers different purity levels from >55% up to >95% to help you make the right choice for your purpose.

Immunograde purity (> 55% up to 70%)

For immunological and related purposes

Minimum amounts: 2 mg to 50 mg

Length: 6-45 amino acids

Please inquire for longer peptides or higher amounts

Even if a purity level of > 70% is better for generating antibodies, a purity level of >55% up to 70% is usually sufficient for this purpose. Immunograde peptides are purified by precipitation and not purified by HPLC methods. To make sure that peptides of this purity work, a higher amount is used for coupling or direct immunisation.

The presence of organic impurities inherent to the synthesis process can be the source of adverse side effects like inflammatory or even toxic effects during the antibody production procedure.

Peptides of purity > 70% and 80% - 90%

For immunological and related purposes. For enzymology, biological activity studies, ELISA pretesting and for other purposes.

Minimum amounts: 2 to 50 mg

Length: 6-45 amino acids

HPLC chromatogram and Mass Spectrum will be delivered.

Please inquire for longer peptides or higher amounts.

> 70% pure peptides are usually better for generating or testing antibodies and also a smaller amount can be used for immunisation purposes. The HPLC-chromatography step will reduce organic impurities to a minimum that is sufficient for immunisation purposes with only little probability of side effects. Therefore, we recommend to use peptides of > 70% purity for immunisation purposes.

Peptides that are > 85% or > 95% pure are usually required in enzymology or biological activity studies. The quality of these peptides is checked by HPLC using a photodiode array detector and by Mass Spectrometry. These data are included in the peptide delivery.

II. Services

Highly purified peptides (> 95% pure)

For enzymology and biological activity studies

Minimum quantity: 2 mg up to 20 mg

Length: 6 to 45 amino acids

Included in price: HPLC analysis and Mass Spectrometry analysis

Please inquire for longer peptides or higher amounts

Peptides that are > 95% pure are usually required in enzymology or biological activity studies. These peptides can also be used as standards in Chromatography. The quality of these peptides is checked by HPLC using a photodiode array detector and by Mass Spectrometry.

Available modifications

N-Acetylation, C-Amidation, Biotinylation, Phosphorylation, Sulfurylation, fluorescent modifications (FITC, rhodamine, etc.) and others.

Prolongation by spacer molecules (e.g. Ahx, or β -Ala), implementation of special groups for Jod125 labelling or implementation of linkers for the selective coupling of peptides to carrier proteins.

If you can't find the modification you want, just contact us at info@genaxxon.com.

Special peptides

Peptides containing non-natural amino acids

Provided the non-natural amino acids (e.g. D-amino acids, β -amino acids etc.) are commercially available, they can be introduced into a peptide sequence. - **Implementation of rare AS** into synthetic peptide, e.g. D-amino acids, N-methyl amino acids, Hydroxyprolin, phosphorylated amino acids (Tyr, Thr, Ser).

Modified peptides

Both side chain modifications and N- or C-terminal modifications are routinely achieved either during or after synthesis. These modifications specifically include the synthesis of biotinylated, phosphorylated, protected and cyclic peptides (such as Cys-Cys disulfide bridges etc.) as well as branched peptides.

Cyclic peptides

Recently, a growing interest in cyclic disulfide-bridged peptides has become apparent. In many instances, classical oxidative cyclizations lead to peptide di- and multimerization or in unwanted cyclic structures. Genaxxon bioscience and its partners have gained in depth experience to overcome problems like that, thus being able to synthesize mono- and dicyclic peptides very efficiently.

From 50 to 1000 peptides

Epitope scanning is a very efficient method to check polyclonal antisera for the specific epitopes the antibodies are recognizing. The principle is to synthesize series of overlapping peptides covering the whole protein sequence and to test the polyclonal (or monoclonal) antibodies against each of them. This technique allows for easy and quick identification of the parts of the protein which are recognized by the antibodies.

Other applications, such as lymphocyte stimulators or enzyme inhibitors also require large numbers of peptides.

Genaxxon bioscience offers custom peptide synthesis services at low cost. Among the existing possible issues to this problem (peptides on membranes, paper, pins or coated on ELISA plates) Genaxxon bioscience chose to develop the service in order to answer in the most flexible way to these needs: in many instances, a soluble, cleaved peptide has many advantages over a peptide fixed on a solid support, because the latter cannot be used readily in many biological experiments. We can now propose series of peptides in quantities ranging from 1 mg up to 20 mg at very attractive prices depending on the length and the number of peptides as well as the quantity needed.

Technical information

The first choice solvent for most peptides is ultra-pure water, or DMSO. If the peptide does not dissolve easily, sonication may help. Dilute acetic acid or ammonium hydroxide may be necessary to dissolve basic or acidic peptides, respectively. For peptides which are not dissolved by these methods, guanidinium chloride or acetonitrile may be necessary. Use of these compounds may have a detrimental effect on some experiments, so we recommend that care be taken when designing the peptide. Residues such as Ala, Cys, Ile, Leu, Met, Phe and Val increase the chance that the peptide will have solubility problems.

Most peptides are stable indefinitely at -20 °C, especially if they have been lyophilized and stored in a desiccator. Allow lyophilized peptides to come to room temperature before exposing them to air. This will minimize moisture-related effects.

When lyophilisation is not possible, the next best method of storage is small, working-size aliquots. For peptides which contain Cys, Met or Trp, deoxygenated buffers are a must for solubilisation because the peptides will readily oxidize to air. Nitrogen or argon passed slowly over the peptide before closing the vial will also decrease oxidation.

Peptides containing Gln or Asn are also easily degraded. All of these peptides have a limited lifetime in comparison to those that do not contain these problem residues.

Delivery

· 70% pure peptides are shipped lyophilized within 14-20 working days of receipt of the order. For highly purified peptides (· 85% pure), some additional days might be required.

Standard Peptide Synthesis

Prod.No.	Product	Pack-size	Price in €
P2130.C000	C-terminal Biotin modification of peptide	set-up	on request
P2131.C000	C-terminal Fluorescein modification of peptide	set-up	on request
P2132.C000	Cyclisation of peptide	set-up	on request
P2122.7010	High grade peptide (10 mg, min. 70% pure)	amino acid	25.00
P2122.8010	High grade peptide (10 mg, min. 80% pure)	amino acid	33.50
P2122.9510	High grade peptide (10 mg, min. 95% pure)	amino acid	95.00
P2122.7002	High grade peptide (2 mg, min. 70% pure)	amino acid	17.50
P2122.8002	High grade peptide (2 mg, min. 80% pure)	amino acid	22.50
P2122.9502	High grade peptide (2 mg, min. 95% pure)	amino acid	77.00
P2122.7020	High grade peptide (20 mg, min. 70% pure)	amino acid	on request
P2122.8020	High grade peptide (20 mg, min. 80% pure)	amino acid	on request
P2122.9520	High grade peptide (20 mg, min. 95% pure)	amino acid	on request
P2122.7005	High grade peptide (5 mg, min. 70% pure)	amino acid	21.50
P2122.8005	High grade peptide (5 mg, min. 80% pure)	amino acid	29.50
P2122.9505	High grade peptide (5 mg, min. 95% pure)	amino acid	77.50
P2122.5510	Immunograde peptide (10 mg, min. 55% pure)	amino acid	15.00
P2122.5502	Immunograde peptide (2 mg, min. 55% pure)	amino acid	10.50
P2122.5520	Immunograde peptide (20 mg, min. 55% pure)	amino acid	on request
P2122.5505	Immunograde peptide (5 mg, min. 55% pure)	amino acid	12.50
P2142.I000	Isotope labelling of peptide	set-up	on request
P2130.N000	N-terminal Biotin modification of peptide	set-up	on request
P2131.N000	N-terminal Fluorescein modification of peptide	set-up	on request
P2096.0000	Peptide Antigen	set-up	on request
P2119.0500	Peptide synthesis for screening	set-up	on request
P2091.1030	Peptide synthesis for screening (TIP method)	set-up	on request
P2120.0000	Peptide Synthesis Trial	set-up	on request
P2097.0000	Protein Antigen	set-up	on request
P2133.P000	Serin-phosphorylation at peptide	set-up	on request
P2136.S000	Serin-sulfurylation at peptide	set-up	on request

II. Services

Standard Peptide Synthesis

Prod.No.	Product	Pack-size	Price in €
P2135.P000	Threonin-phosphorylation at peptide	set-up	on request
P2138.S000	Threonin-sulfurylation at peptide	set-up	on request
P2134.P000	Tyrosin-phosphorylation at peptide	set-up	on request
P2137.S000	Tyrosin-sulfurylation at peptide	set-up	on request

*Prices given in above table are only meant as an indication. Please inquire for a quotation. Most often our price will be below the prices given in the tables.

Immunograde peptides are not purified by HPLC. Nevertheless purity is normally good enough for use in immunisation procedures. All peptides (not immunograde ones) are supplied with MS- and HPLC data sheet.

For standard immunisation procedures peptides of 70% purity are used. If you want to use „Immunograde“ peptides, double amounts have to be injected.

Please inquire for other amounts, lengths or purities (info@genaxxon.com, www.genaxxon.com)

All purified peptides include complete documentation with analytical HPLC and MS.

Our peptides will be delivered with free COOH and NH₂ termini.

If required, we will perform N-terminal acetylation or C-terminal amidation free of charge.

We will deliver your peptides in aliquots on request.

**Please tell us your specific needs.
We will consult you and prepare a tailor made quotation.**

Lipopeptides

Prod.No.	Product	Pack-size	Price in €
P2228.0001	Dhc-GDPKHPKSF	1 mg	250.81
P2227.0001	Dhc-SKXXX	1 mg	151.88
P2212.0001	FSL-1	1 mg	458.35
P2221.0002	FSL-1 Ala-scan	1.8 mg	1333.85
P2215.0001	FSL-1-Biotin	1 mg	667.44
P2219.0001	FSL-1-FLAG-tag	1 mg	667.44
P2216.0001	FSL-1-Fluorescein	1 mg	667.44
P2217.0001	FSL-1-Rhodamine	1 mg	667.44
P2230.0001	GDPKHPKSF	1 mg	250.81
P2206.0001	Pam2Cys-SKXXX	1 mg	368.48
P2207.0001	Pam2Cys-SKXXX(Aca-Aca-Biotin)	1 mg	667.44
P2209.0001	Pam2Cys-SKXXX(Aca-Aca-Fluorescein)	1 mg	667.44
P2211.0001	Pam2Cys-SKXXX(Aca-Aca-Rhodamine)	1 mg	667.44
P2218.0001	Pam2Cys-SKXXX-FLAG-tag	1 mg	667.44
P2246.0001	Pam3CysAQEKEAKSELDYDQT	1 mg	549.76
P2239.0001	Pam3CysGSHQMKSEGHANMQL	1 mg	549.76
P2241.0001	Pam3CysKQNVSSLDEKNSVSV	1 mg	549.76
P2243.0001	Pam3CysNNGGPELKSDEVAKS	1 mg	549.76
P2242.0001	Pam3CysNNSGKDGNTSANSAD	1 mg	549.76
P2200.0001	Pam3Cys-SKXXX	1 mg	130.06
P2200.0002	Pam3Cys-SKXXX	2 mg	154.83

Lipopeptides

Prod.No.	Product	Pack-size	Price in €
P2200.0005	Pam3Cys-SK4444	5 mg	260.12
P2201.0001	Pam3Cys-SK4444 (Aca-Aca-Biotin)	1 mg	667.44
P2203.0001	Pam3Cys-SK4444 (Aca-Aca-Fluorescein)	1 mg	667.44
P2205.0001	Pam3Cys-SK4444 (Aca-Aca-Rhodamine)	1 mg	667.44
P2231.0001	Pam3Cys-SK4444-FLAG-tag	1 mg	667.44
P2244.0001	Pam3CysSQEPAAPAAEATPAG	1 mg	549.76
P2238.0001	Pam3CysSSGNKSAPSSASSS	1 mg	549.76
P2237.0001	Pam3CysSSGSKPSGGPLPDAK	1 mg	549.76
P2234.0001	Pam3CysSSNAKIDQLSSDVQT	1 mg	549.76
P2235.0001	Pam3CysSSNKSTTGSGETTTA	1 mg	549.76
P2245.0001	Pam3CysSSSKSSDSSAPKAYG	1 mg	549.76
P2240.0001	Pam3CysSSSNDDAAGNGAAQT	1 mg	549.76
P2236.0001	Pam3CysSSTKPVSDTSPKPA	1 mg	549.76
P2226.0001	PamCGDPKHPKSF	1 mg	368.48
P2225.0001	PamCSK4444	1 mg	152.96
P2224.0001	Pam-Dhc-GDPKHPKSF	1 mg	265.48
P2223.0001	Pam-Dhc-SK4444	1 mg	151.88
P2232.0001	PHC-SK4444	1 mg	151.88
P2233.0001	PHC-SK4444(Biotin-Aca-Aca)	1 mg	667.44
P2213.0001	R-FSL-1	1 mg	667.44
P2208.0001	R-Pam2Cys-SK4444	1 mg	667.44
P2202.0001	R-Pam3Cys-SK4444	1 mg	667.44
P2214.0001	S-FSL-1	1 mg	667.44
P2229.0001	SK4444	1 mg	152.96
P2210.0001	S-Pam2Cys-SK4444	1 mg	667.44
P2204.0001	S-Pam3Cys-SK4444	1 mg	667.44

Siderophores

A Siderophore (Greek for iron carrier) is an iron chelating compound secreted by microorganisms. Iron Fe³⁺ ions have a very low solubility at neutral pH and therefore cannot be utilized by organisms. Siderophores dissolve these ions by chelation as soluble Fe³⁺ complexes that can be taken up by active transport mechanisms. Many siderophores are nonribosomal peptides. Examples of siderophores produced by various bacteria and fungi are ferrichrome (*Ustilago sphaerogena*), enterobactin (*Escherichia coli*), mycobactin (*Mycobacterium*), enterobactin and bacillibactin (*Bacillus subtilis*), ferrioxamine B (*Streptomyces pilosus*), fusarinine C (*Fusarium roseum*), yersiniabactin (*Yersinia pestis*), vibriobactin (*Vibrio cholerae*), azotobactin (*Azotobacter vinelandii*), pseudobactin (*Pseudomonas B 10*), erythrobactin (*Saccharopolyspora erythraea*) or ornibactin (*Burkholderia cepacia*).

Prod.No.	Product	Pack-size	Price in €
S4019.0001	Aerobactin (Fe-free)	1 mg	387.45
S4044.0001	Albomycin (HPLC pure)	1 mg	504.00
S4002.0001	Coprogen	1 mg	344.59
S4018.0001	Desferri-Arthrobactin	1 mg	387.45
S4025.0001	Desferrichrome	1 mg	387.45
S4026.0001	Desferrichrome A	1 mg	387.45
S4058.0001	Desferrichrysin	1 mg	387.45
S4020.0001	Desferricoprogen	1 mg	387.45

II. Services

Siderophores

Prod.No.	Product	Pack-size	Price in €
S4027.0001	Desferricrocin	1 mg	387.45
S4021.0001	Desferrifusigen	1 mg	387.45
S4031.0001	Desferriornibactin C6	1 mg	387.45
S4030.0001	Desferriornibactins (C4, C6, C8)	1 mg	387.45
S4022.0001	Desferrioxamine E	1 mg	387.45
S4023.0001	Desferrioxamine G	1 mg	387.45
S4028.0001	Desferrirhodin	1 mg	387.45
S4029.0001	Desferrirubin	1 mg	387.45
S4034.0001	Desferritriacetylfusarinine C	1 mg	387.45
S4041.0001	DHBS monomer (Fe-free)	1 mg	442.58
S4035.0001	Enterobactin (Fe-form)	1 mg	442.58
S4038.0001	Enterobactin (Fe-free)	1 mg	442.58
S4001.0001	Fe-Aerobactin	1 mg	344.59
S4000.0001	Fe-Arthrobactin	1 mg	344.59
S4015.0001	Fe-Rhizoferrin	1 mg	367.50
S4006.0001	Fe-Rhodotorulic acid	1 mg	344.59
S4007.0001	Ferrichrome	1 mg	344.59
S4008.0001	Ferrichrome A	1 mg	344.59
S4009.0001	Ferrichrysin	1 mg	344.59
S4010.0001	Ferricrocin	1 mg	344.59
S4004.0001	Ferrioxamine E	1 mg	344.59
S4005.0001	Ferrioxamine G	1 mg	344.59
S4011.0001	Ferrirhodin	1 mg	344.59
S4012.0001	Ferrirubin	1 mg	344.59
S4036.0001	Fe-Salmochelin S4	1 mg	504.00
S4016.0001	Fe-Schizokinen	1 mg	367.50
S4060.0001	Fe-Vibriobactin	1 mg	504.00
S4037.0001	Fe-Yersiniabactin	1 mg	504.00
S4003.0001	Fusigen	1 mg	344.59
S4049.0001	HPLC-Cal. Kit Coprogens	1 mg	504.00
S4045.0001	HPLC-Cal. Kit Enterobactin	1 mg	504.00
S4048.0001	HPLC-Cal. Kit Ferrichromes	1 mg	504.00
S4047.0001	HPLC-Cal. Kit Ferrioxamines	1 mg	504.00
S4046.0001	HPLC-Cal. Kit Salmochelins	1 mg	504.00
S4040.0001	Linear Dimer (Fe-free)	1 mg	442.58
S4039.0001	Linear Trimer (Fe-free)	1 mg	442.58
S4013.0001	Ornibactin (mixture)	1 mg	367.50
S4014.0001	Ornibactin C6	1 mg	367.50
S4064.0001	Pyoverdine P. aeruginosa	1 mg	442.58
S4065.0001	Pyoverdine P. aeruginosa	1 mg	442.58
S4066.0001	Pyoverdine P. aeruginosa	1 mg	442.58
S4052.0001	Pyoverdine P. aeruginosa (Fe-free)	1 mg	442.58
S4053.0001	Pyoverdine P. aeruginosa (Fe-free)	1 mg	442.58
S4054.0001	Pyoverdine P. aeruginosa (Fe-free)	1 mg	442.58
S4062.0001	Pyoverdine P. fluorescens	1 mg	442.58
S4063.0001	Pyoverdine P. fluorescens	1 mg	442.58

Siderophores

Prod.No.	Product	Pack-size	Price in €
S4050.0001	Pyoverdine P. fluorescens (Fe-free)	1 mg	442.58
S4051.0001	Pyoverdine P. fluorescens (Fe-free)	1 mg	442.58
S4067.0001	Pyoverdine P. putida	1 mg	442.58
S4068.0001	Pyoverdine P. putida	1 mg	442.58
S4055.0001	Pyoverdine P. putida (Fe-free)	1 mg	442.58
S4056.0001	Pyoverdine P. putida (Fe-free)	1 mg	442.58
S4069.0001	Pyoverdine P. tolaasii	1 mg	442.58
S4057.0001	Pyoverdine P. tolaasii (Fe-free)	1 mg	442.58
S4032.0001	Rhizoferrin (Fe-free)	1 mg	387.45
S4024.0001	Rhodotorulic acid (Fe-free)	1 mg	387.45
S4042.0001	Salmochelins S4 (Fe-free)	1 mg	504.00
S4033.0001	Schizokinen (Fe-free)	1 mg	387.45
S4061.0001	Triacetylfusarinine C	1 mg	367.50
S4059.0001	Vibriobactin (Fe-free)	1 mg	504.00
S4043.0001	Yersiniabactin (Fe-free)	1 mg	504.00

Protein Purification

Prod.No.	Product	Pack-size	Price in €
P2021.1000	Affinity Protein Purification (1 L flask)	set-up	1787.01
P2021.5000	Affinity Protein Purification (fermentor)	set-up	3900.47
P2045.0012	Protein purification by IEF electrophoresis (12 cm)	set-up	609.98
P2045.0025	Protein purification by IEF electrophoresis (25 cm)	set-up	649.00
P2057.0000	Protein purification by SDS-gel electrophoresis	set-up	227.60

Protein Labelling

Prod.No.	Product	Pack-size	Price in €
P2040.0005	N-terminal biotinylation of Protein (5 mg)	set-up	343.23
P2040.0010	N-terminal biotinylation of Protein (10 mg)	set-up	491.53

Cell Line Service

Prod.No.	Product	Pack-size	Price in €
P2046.0010	Cell cultivation in spinner flasks	10 pellets	1689.47
P2046.0050	Cell cultivation in spinner flasks	50 pellets	4095.56
P2046.0100	Cell cultivation in spinner flasks	100 pellets	6241.54
P2047.0001	Cell production and cell processing	1 litre	1169.23
P2047.0005	Cell production and cell processing	5 litres	3430.96
P2047.0010	Cell production and cell processing	10 litres	5591.24
P2045.0005	Production of adherent cells	5 pellets	2048.43
P2045.0010	Production of adherent cells	10 pellets	3316.51
P2045.0050	Production of adherent cells	50 pellets	8694.46
P2044.0002	Stability check	set-up	3999.32

II. Services

Protein Analysis

Amino Acid Analysis

Prod.No.	Product	Pack-size	Price in €
P2145.0003	Amino Acid Analysis from animal food	set-up	189.16
P2145.0004	Amino Acid Analysis from physiological sample	set-up	154.83
P2145.0001	Amino Acid Analysis of given Sample (total hydrolysis)	set-up	167.22
P2145.0002	Amino Acid Analysis of given Sample (without total hydrolysis)	set-up	148.64

Protein Sequencing

Prod.No.	Product	Pack-size	Price in €
P2055.0000	2D Gel electrophoresis	set-up	on request
P2047.0000	Automated Edman degradation of protein.	set-up	433.53
P2049.0000	Chemical or enzymatic cleavage in solution	set-up	191.99
P2051.0000	Fractionation of peptides by HPLC	set-up	322.05
P2053.0000	Insufficient sample	set-up	322.05
P2140.0000	MALDI-TOF peptide mapping	set-up	588.36
P2139.0000	MALDI-TOF Set-up	set-up	167.22
P2052.0000	N-terminal protein sequencing service	set-up	1226.27
P2141.0000	Proteinidentification by ESI-MS/MS	set-up	on request
P2050.0000	Proteolytic cleavage	set-up	260.12
P2054.0000	SDS-Gel electrophoresis	set-up	136.25
P2048.0000	Subsequent Degradation steps	step	61.93

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affordable cell culture service

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Simply paste the protein sequence of your target (if desired, include epitope tags, or other modifications - total sequence is limited to 500 aa = 1500 bp), choose from HEK or CHO cells, enter your personal data, and submit your order. As simple as that and it will take you no more than 5 minutes!

Timeline guaranteed

In the unlikely case your project is not completed within the promised 30 business days, you will receive a 5 % discount for each additional week^{*1}.

Target expression guaranteed

cytobox™ takes advantage of Trenzyme's validated ExoIN technology. Thus, target expression is guaranteed^{*2}. Expression is assessed by qPCR. No expression, no costs for you!

Competitive price

Unbeatable cost-benefit ratio of € 6655,- per cell line! This price includes everything from the gene synthesis to the media starter pack^{*3}.

Media starter pack included

The starter pack contains ready-to-use cytobox™ media. You can start culturing your cytobox™ cell line immediately. No time loss due to media adaptation.

cytobox™ ready-to-use media available

Validated optimized growth media for cytobox™ cell lines ensuring easy use and reproducible results for your research applications.

^{*1} From order confirmation to shipping date

^{*2} Expression is only guaranteed if cytobox™ media and reagents are used for culturing of cytobox™ cells

^{*3} Net price, shipment not included

The cytobox™ work flow



1) Custom gene synthesis of up to 1500 bp including codon optimization

Benefits for you:

- . easy generation of mutant and tagged variants
- . optimized expression
- . guaranteed error-free



2) Rapid generation of stable homogenous HEK and CHO cell lines

Benefits for you:

- . highly defined parental cell lines
- . optimized media and reagents
- . guaranteed feasibility answer



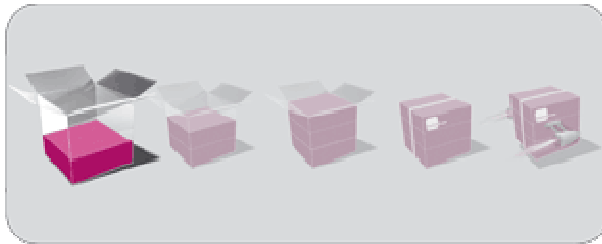
3) Analysis of target expression by qPCR

Benefits for you:

- . rapid and reliable assessment of target expression
- . quantitative measurement of target expression level
- . guaranteed target expression

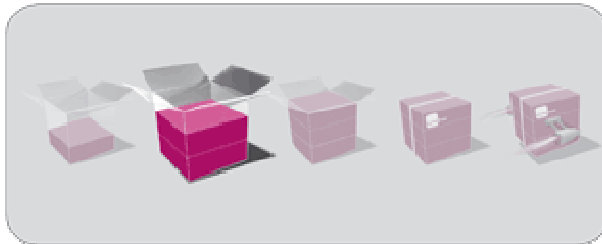
How to order cytoBox™ cell line(s)

Five easy steps and 30 business days to your cytoBox™ cell line.
Simply follow the steps below ...



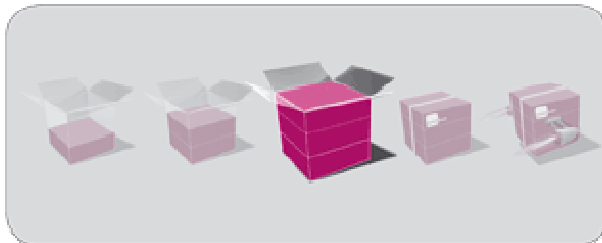
Step 1

Enter your personal data



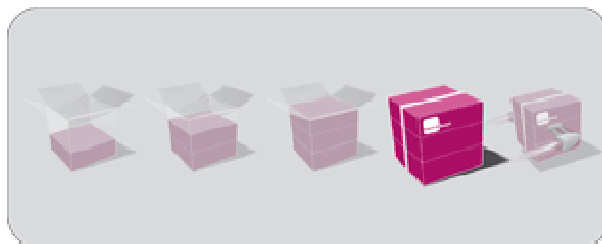
Step 2

Define your cytoBox™ cell line



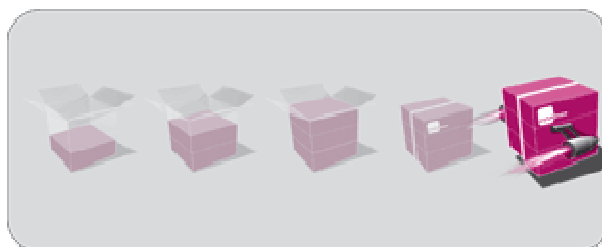
Step 3

Read and confirm our terms and conditions



Step 4

Are these values correct?



Step 5

Confirmation

Are you ready? We are!

Ready ... Set ... Go:

... receive your order confirmation ...

... and the clock is running.

[order your cytoBox™ cell line\(s\) now!](#)

Cloning and Expression

From the gene to the protein ...

From having a piece of DNA it can still be a long way to go for having cloned a gene or even having a purified and active protein in your hand.

We at Genaxxon bioscience know these problems well and offer our knowledge to overcome your problems with cloning and expression. The Genaxxon bioscience service is not restricted to *E.coli* only, but uses also the Baculo virus - insect cell expression system to synthesise correctly matured, folded and processed recombinant proteins or eucaryotic systems.

Genaxxon bioscience offers you not only custom services for cloning and gene expression but also a complete service ranging from oligonucleotide synthesis, PCR-amplification, cloning to expression, isolation and purification, as well as the production of antibodies for your immunological studies.

Cloning and more ...

- PCR amplification of supplied gene followed by subcloning in a vector of your choice
- subcloning from one vector into another (e.g. expression vector), sticky or blunt, easy or complicated
- production of the recombinant transfer vector for co-transfection
- construction of recombinant Baculo virus
- cloning of synthetic genes
- synthesis and cloning of cDNA
- mutagenesis
- construction of libraries
-

Expression and more ...

- generation of high titer stock
- control of expression and optimisation
- expression from small scale (flask) to large scale (fermenter)
- *Escherichia coli*, *Saccharomyces cerevisiae*, Baculo System
-

Purification and more ...

- affinity purification of protein
- individual purification procedures other than affinity
- purification of inclusion bodies and re-naturation
- activity testing
- immunisation
- ...

Genaxxon bioscience Cloning and Expression Service and Price list

Prod.No.	Product	Pack-size	Price in €
P2008.0000	cDNA cloning	set-up	3095.41
P2002.0002	Cloning of PCR product	clone	1548.32
P2144.0000	Cloning of synthetic DNA	set-up	848.48
P2012.0000	in vitro Mutagenesis	set-up	1216.05
P2001.0000	Library construction	set-up	on request
P2009.1010	Plasmid preparation (up to 10 mg)	per plasmid	1102.41
P2009.0010	Plasmid preparation (up to 10 µg)	per plasmid	15.61
P2009.0100	Plasmid preparation (up to 100 µg)	per plasmid	93.83
P2009.0500	Plasmid preparation (up to 500 µg)	per plasmid	341.56
P2005.0002	Subcloning (blunt end, < 2000 bp)	clone	713.16
P2005.0003	Subcloning (difficult enzymes or fragments > 2000 bp)	clone	on request
P2005.0001	Subcloning (sticky end, < 2000 bp)	clone	626.45
P2007.0000	Synthetic genes	bp	6.96
P2010.0000	Transformation of plasmid-DNA	per plasmid	40.97
P2003.0001	Verification sequencing (< 300 bp)	clone	63.73
P2003.0002	Verification sequencing (> 300 bp)	per base	0.24
P2020.5000	Production of proteins from rec. Baculo-viruses (5 L)	5 L	4644.97
P2020.0500	Production of proteins from rec. Baculo-viruses (500ml)	500 mL	1083.83
P2011.0000	Protein Expression (fermentor)	5 litres	3362.07
P2011.1000	Protein Expression (flask)	1 L	634.08
P2011.0003	Protein Expression Screening (E.coli).	per condition	164.56
P2025.0010	Transient protein expression in insect cells	10 mL	3852.23
P2014.0000	Cold osmotic shock	1 L	365.40
P2013.0000	Concentration of inclusion bodies	1 L	on request
P2017.0000	Construction of recombinant Baculo virus	clone	4987.77
P2018.1000	Generation of high titer stock (1 L)	1000 mL	3310.01
P2018.0100	Generation of high titer stock (100 mL)	100 mL	1169.23
P2018.0500	Generation of high titer stock (500 mL)	500 mL	2093.95
P2019.0000	MOI Assay of protein production	set-up	1138.02
P2020.1000	Production of proteins from rec. Baculo-viruses (1 L)	1 L	2438.61
P2020.1020	Production of proteins from rec. Baculo-viruses (20 L)	20 L	10339.70
P2020.5000	Production of proteins from rec. Baculo-viruses (5 L)	5 L	4877.22
P2020.0500	Production of proteins from rec. Baculo-viruses (500ml)	500 mL	1138.02
P2011.0000	Protein Expression (fermentor)	5 litres	3530.18
P2011.1000	Protein Expression (flask)	1 L	665.78
P2011.0003	Protein Expression Screening (E.coli).	per condition	172.79
P2025.0010	Transient protein expression in insect cells	10 mL	4044.84

Prices valid from January 2012

For more information, please contact Genaxxon bioscience at: www.genaxxon.com

Recombinant Protein Production in Human HEK293 Cells

Are you facing problems concerning the bioactivity of your recombinant produced protein due to unsatisfactory Golgi and ER derived processing and glycosylation?

We are offering the service to produce your protein in an established human cell line. HEK293 (hn embryonic kidney) cells are suitable for the recombinant production of correctly processed and glycosylated proteins especially human proteins. The expressed recombinant proteins show excellent bioactivity compared to molecules produced in *E. coli*.

The proteins are produced in a serum free culture medium with defined compounds of safe origin. The use of this medium for cultivation guarantees constancy of the production process. Serum free cultivation does justice to the standards for hygiene, abstinence of virus, function and purity of the product.

We offer a complete range of working steps for the recombinant production of your desired protein and deliver the purified protein to you. Cloning of the gene of interest in an appropriate expression vector and preparation of the plasmid DNA is followed by transfection in HEK293 cells and selection of stable clones with high productivity. These are checked for product identity and bioactivity. Selected clones expressing the recombinant protein in secreted form or intracellularly are expanded and adapted to serum-free cultivation in suspension cultures. The expressed protein is purified chromatographically from culture supernatant or cell extract. Purification is carried out to partial or high degree according your individual demands and offered in liquid or lyophilized form.

Lab scale production can be expanded to pilot scale if needed.

Service Description		Price (Euro)
Cloning of GOI	2 weeks	2039.63
Manufacture gene to be expressed Cloning of gene into eukaryotic expression vector Plasmid purification and sequencing		
Transfection in recipient HEK293 cells		330.75
Transfer of expression construct in HEK293		
Selection of High Producer Clones	6 weeks	3969.00
Isolation of clones with high productivity and stable expression.		
Verification of the Expressed Protein		716.63
Checking of identity of the expressed protein by protein -, analytical-, and immunological screenings.		
Adaptation to Serum-Free Cultivation	4 weeks	1543.50
Gradual adaptation of cells to serum free cultivation in suspension		
Lab Scale Production		716.63 / L
Cultivation of recombinant cells in lab scale and isolation of the product from culture supernatant or cell extract.		
Chromatographic Purification	On time and material base	
Chromatographic purification and concentration of the produced protein		
Checking of Biological Activity	On time and material base	
Carrying out of enzymatic and cell based assays for determination of bioactivity		

Proteins from human cell lines

Recombinant Human Cellular Fibronectin

Description

Fibronectin is a high molecular mass, multidomain glycoprotein which plays a key role in various cell-cell and cell-substrate processes such as cell attachment, spreading, growth, differentiation and migration. It is present at cell surfaces and contributes to ECM architecture. There are binding activities for collagen, heparin, fibrin, bacteria and DNA. Fibronectin is composed of two subunits each consisting of three types of homologous repeating sequences called type I, II, III homologies. These different structural segments contribute to the versatile functions of the molecule. Cellular fibronectin compared to plasma FN contains the extra domain IIIICS which probably contributes to different biological activity of the protein.

Source

- original DNA sequence for cellular fibronectin
- produced serum free in a human cell line
- purified from the culture supernatant

Purification

Protein purified by affinity and gel filtration chromatography without use of denaturing agents

Formulation

- liquid or freeze dried (sterile)

Purity

>95% SDS-PAGE (HMS 800 kDa, reduced dimer at 400 kDa - monomer at 220 kDa)

Identity

Immuno-Blot with specific polyclonal IgG

Activity

tested in a cell attachment assay

Stability

at least 12 months at -20° C (avoid repeated freeze/thaw cycles when dissolved)

Pack-Sizes

500 µg and 1000 µg

Recombinant Human Vitronectin

Description

Vitronectin is a multifunctional glycoprotein present in blood and in the extra-cellular matrix. The complete open reading frame encodes for 459 amino acids which are preceded by a 19 amino acid signal peptide. It contains three glycosylation sites and its carbohydrate moiety contributes about 30% to this molecular mass.

Vitronectin is an important participant in a large variety of biological functions. These include cell attachment, spreading and migration, blood coagulation, plasminogen activation, fibrinolysis, and the regulation of complement function. Recombinant vitronectin appears as multimer compared to the one-chain form in blood. This altered structure may contribute to different biological activities.

Source

- original DNA sequence for vitronectin
- produced serum free in a human cell line
- purified from the culture supernatant

Purification

by affinity chromatography without the use of denaturing agents

Formulation

- liquid or freeze dried (sterile)

Purity

>95% SDS-PAGE (HMS 800 kDa, reduced dimer at 120 kDa, monomer at 65 kDa)

Identity

Identity confirmed by Immuno-Blot with specific polyclonal antiserum

Activity

tested in a cell attachment and spreading assay

Stability

at least 12 months at -20° C (avoid repeated freeze/thaw cycles when dissolved)

Pack-Sizes

250 µg - 500 µg - 1000 µg

Literature

Seger D., Shaltiel S. (2000) FEBS Lett. 480, 169-174

Schvartz I. et al. (1999) IJBCB 31, 539-544

Suzuki S. et al. (1985) EMBO J. 4, 2519-2524

Recombinant Human Decorin**Description**

Human Decorin, which is synthesized as a prepro form with 359 amino acids, is a member of the family of small chondroitinsulphate/ dermatan sulphate proteoglycans. Its mature form consists of a core protein of 329 amino acids, a single glycosaminoglycan chain bound to serine 4 and either two or three asparagine-bound oligosaccharides. The central part of the core protein consists of 11 repeats of a leucine-rich sequence motif. Decorin is widely distributed in all kinds of tissues. It binds collagen type I, II, VI and has been observed associated with collagen fibrils. Decorin can retard collagen fibrillogenesis.

Source

- full-length cDNA without tags cloned in a eucaryotic vector
- produced serum free in a human cell line
- purified from the culture supernatant

Purification

by ion exchange chromatography without the use of denaturing agents

Formulation

- liquid or freeze dried (sterile and non-sterile)

Concentration

approx. 1500 µg/mL

Purity

>95% SDS-PAGE, dispersed band centred at 120 kDa

Identity

Immuno-Blot with specific polyclonal IgG

Activity

tested in a collagen type I inhibition assay

GAG/Protein: approx. 1,5 : 1

Stability

at least 12 months at -20° C, avoid repeated freeze/thaw cycles

Pack-Sizes

250 µg - 500 µg - 1000 µg - Bulk

Literature

Kresse, H. et al. (1994) Proteoglycans ed. by P. Jolles Birkhäuser Verlag

Hausser, H. et al. (1998) Arch. Bioch. Biophys. 349, 363-370

Iozzo, R.V. et al. (1998) J. Biol. Chem. 274, 4489-4492

Yamaguchi, Y., Ruoslahti, E. (1988) Nature 336, 244-246

Recombinant Human Thrombospondin 1

Description

Thrombospondin is a large, trimeric, modular glycoprotein composed of three identical subunits with 1170 amino acids. It is a major constituent of platelets released from its alpha-granules in response to thrombin stimulation. TSP is also a transient component of extracellular matrix in developing and repairing tissues. TSP is a multifunctional protein consisting of distinct structural domains. It contains an aminoterminal domain with a heparin-binding site, a segment that is homologous to the alpha1 chain of type 1 procollagen (PC), three type 1 (properdin) repeats, three type 2 (EGF-like) repeats, seven type 3 (Ca-binding) repeats and a carboxy-terminal cell-binding domain. The different segments are assigned to cell attachment, cell movement, modulation of proliferation, platelet aggregation, modulation of angiogenesis, neurite outgrowth and platelet aggregation. TSP is synthesized and secreted by platelets, fibroblasts, endothelial cells, smooth muscle cells and tumour cells. It functions in proliferation of cells, wound healing, angiogenesis and tumorigenesis.

Source

- original DNA sequence for human TSP 1
- produced serum free in a human cell line
- purified from culture supernatant

Purification

by affinity chromatography and gel filtration

Formulation

- liquid or dried -
- sterile and non-sterile -

Purity

>95% SDS-PAGE (non-reduced band at 450 kDa,)

Identity

Identity confirmed by Immuno-Blot with specific monoclonal IgG

Activity

tested in functional and cell adhesion assays

Stability

at least 12 months at -20° C (avoid repeated freeze/thaw cycles)

Pack-Sizes

250 µg - 500 µg - 1000 µg

Literature

Adams J. C., Tucker, R.P. (2000) Dev Dyn 218, 280-99

Lawler J. (2000) Curr Opin Cell Biol 12, 634-40

Albo D. et al. (2000) Br J Cancer 83, 298-306

Bornstein P. (2000) Matrix Biol 19, 555-6

Amino Acid Analysis

Prod.No.	Product	Pack-size	Price in €
P2145.0001	Amino Acid analysis of given sample (total hydrolysis)	set-up	167.22
P2145.0002	Amino Acid analysis of given sample (without total hydrolysis)	set-up	148.64
P2145.0003	Amino Acid analysis from animal food	set-up	189.16
P2145.0004	Amino Acid Analysis from physiological sample	set-up	154.83

Service description of amino acid analysis

“One of the most accurate methods of determining protein concentrations is probably acid hydrolysis followed by amino acid analysis (molecular weight of protein or peptide has to be known). Amino acid analysis refers to the methodology used to determine the amino acid composition or content of proteins, peptides, pharmaceutical preparations or other matrices. Most other methods are sensitive to the amino acid composition of the protein, and absolute concentrations cannot be obtained.”(Waterborg, Jakob H. "The Lowry Method for Protein Quantitation", The Protein Protocols Handbook, 2nd Ed., pg 7.). In addition, this analysis can be used to confirm the amino acid composition of peptides and proteins, determine the ratio of proteins in a complex matrix, the amount of contaminating protein in DNA and other non-protein samples, and which amino acids are depleted or enriched in cell media and other fluids. Some examples of samples that are most often analysed are: proteins - peptides - food - plants - serum - urine. It can also be used to confirm the sequence of a given peptide (not the sequence itself, but the amino acids content of the peptide). Some of our customers do also use amino acid analysis to determine the peptide load of a solid matrix on which peptides are immobilised. Amino acid analysis may be even able to determine between a wild type cell and a mutant cell if the mutant cell differs in its peptide or protein pattern.

If you are interested in getting information about free amino acids, e.g. in the cytoplasm of a cell amino acid analysis is also a very useful tool to get this information fast and reliable.

For being able to analyse a given sample there are four principle steps in amino acid analysis:

- **hydrolysis** of given sample, if necessary: The complete hydrolysis of proteins and peptides will release all amino acids making them accessible for the next step in amino acid analysis, the derivatisation.

The progression of the next two steps depends on the analysis method.

- **derivatization:**

post-column derivatization: Many amino acid analysis techniques exist, and the choice of any one technique often depends on the sensitivity required from the assay. In general, about one-half of the amino acid analysis techniques employed rely on the separation of the free amino acids by ion-exchange chromatography followed by post-column derivatization (e.g., with ninhydrin or o-phthalaldehyde). Post-column detection techniques can be used with samples that contain small amounts of buffer components, such as salts and urea, and generally require between 5µg and 10µg of protein sample per analysis.

Pre-column derivatization: chemical modification of the free amino acids to enhance the detection limit before HPLC chromatography. Derivatization is done by, e.g. FMOC (9-Fluorenylmethyl chloroformate), 6-amino-quinolyl-N-hydroxysuccinimidyl carbamate (AQC) or PITC (Phenylisothiocyanate), followed by reversed-phase HPLC. These reagents react with free amino groups of free amino acids, but also with other substances that do contain functional amino groups.

Pre-column derivatization techniques are very sensitive and usually require between 0.5µg and 1.0µg of protein sample per analysis but may be influenced by buffer salts in the samples. Pre-column derivatization techniques may also result in multiple derivatives of a given amino acid, which complicates the result interpretation.

Post-column derivatization techniques are generally influenced less by performance variation of the assay than pre-column derivatization techniques.

- **separation** of the derivatized amino acids on reversed phase columns: The next step in amino acid analysis is the separation of each derivatized amino acid by HPLC on reversed phase columns.

II. Services

- **separation** of the free amino acids on ion-exchange columns: Free, non-derivatized amino acids can be separated on cation exchange columns before the separated amino acids get derivatized by ninhydrin or OPA directly after the separated amino acids leave the separation column.

- subsequent **interpretation of the result and calculations**: When determining the amino acid content of a protein/peptide hydrolysate, it should be noted that the acid hydrolysis step destroys tryptophan and cysteine. Serine and threonine are partially destroyed by acid hydrolysis, while isoleucine and valine residues may be only partially cleaved. Methionine can undergo oxidation during acid hydrolysis, and some amino acids (e.g., glycine and serine) are common contaminants. Therefore, the quantitative results obtained for cysteine, tryptophan, threonine, isoleucine, valine, methionine, glycine, and serine from a protein/peptide hydrolysate may be variable and may warrant further investigation and consideration.

In general pure samples are required. The presence of salts, buffers, or detergents are deleterious. Amines (primary or secondary) will react with the carbamate, adversely affecting results. While salts, especially strong buffer substances can alter the pH of the sample causing the hydrolysis/derivatisation to be incomplete or simply fail. Additionally, significant levels of glycerol or carbohydrates are problematic - the glycerol is non-volatile and attracts moisture (acid) and carbohydrates char, decomposing to ash taking the sample with them. If it is impossible to clean up your sample, we can attempt other desalting methods, such as precipitation or reverse phase HPLC cleanup.

For analysis we do need 1.0µg to 5.0µg (20pmols to 100pmols) protein, based on an average molecular weight of 25,000 Da. For peptides, the requirement is much smaller - 0.2µg to 1.0µg (200pmols to 1,000pmols).

Delivery times for results are in the range of about 7 working days, but may vary due to demand.

Samples can be send by post or parcel service to Genaxxon bioscience GmbH. Samples can be dry or in liquid (most preferable in low salt buffer or better in demineralised water). Please make sure that your sample is packed safely and cannot break or leak.

Hydrolysis effects on different amino acids

Amino Acid	Effect
Valine, Isoleucine	Bonds are not easily broken
Threonine, Serine	Slowly destroyed by acid hydrolysis. Serine is a common contaminant.
Methionine	Partially oxidised during acid hydrolysis.
Asparagine, Glutamine	Converted to aspartic acid and glutamic acid
Tryptophane	Destroyed to high parts by acid hydrolysis
Cysteine	Destroyed by acid hydrolysis

Effects of contaminants on derivatisation yield *

Contaminant	Effect
Ammonium acetate	No adverse effect on results
Sodium acetate	His low; Tyr, Val, Ile, Leu, Phe and Lys slightly lower
Triethylammonium acetate	His and Thr slightly lower
Ammonium bicarbonate	Thr slightly lower
Sodium bicarbonate	His and Tyr low; Ile, Leu and Phe also low
Sodium borate	No adverse effect on results
Sodium chloride	No adverse effect on results
Sodium phosphate	Low and variable yields of most amino acids
Triethylammonium phosphate	No adverse effect on results
CAPS	Very large late elution peak obscures Phe and Lys
HEPES	Artefact peak which co-elutes with Met
TRIS	His slightly low, artefact peak co-elutes with Tyr
SDS / Triton X100	His and Thr slightly low, Cys and Lys yields are good

* Effects of common buffer salts and detergents on amino acid derivatisation. All solutions were added to 100 pmols of hydrolysate amino acid standard in a 20 μ L volume.
 Concentration of salt solutions 50mM.
 Concentration of detergent solutions 0.1% (v/v)

Effects on metal ions on amino acid analysis results **

Amino Acid	Effect
Aluminium	Asp and Glu very low, all other amino acids low except Pro
Boron	No significantly adverse effects, His and Thr may be slightly low
Copper	Cys and Lys almost gone, His low, Asp and Glu slightly low
Iron	Glu, Ser, His, Thr, Cys, Lys all low
Lead	Asp, Ser, Thr, Lys slightly low
Nickel	Almost no recovery of any derivatives except Thr and Pro
Zinc	Acidic and basic amino acids and Cys very low, Ser slightly low

** All solutions were added to 100pmoles of hydrolysate amino acid standard in a 20 μ L volume.
 Concentration of solutions 20ppm

Polyclonal Antibody Services

Antibodies with Quality Guarantee

Genaxxon bioscience guarantees a minimal titer against your antigen!

Description

Genaxxon bioscience offers a range of polyclonal antibody services according to customers requirements. Rabbits and other animals can be immunised with peptides or recombinant proteins. Antibodies are delivered with detailed product report and titer guarantee. Please send an e-mail with your request and we will get back to you with a detailed project description and price quotation within 24 hours.

Only animals bred for immunisation are used, and animals are kept at conditions which minimize risk for interference with pathogens.

Genaxxon bioscience offers a complete peptide immunisation package with peptide synthesis, peptide purification to a purity higher than 85%, conjugation to KLH and BSA carrier proteins, immunisation of two New Zealand White Rabbits (or other animals), isolation of pre-immune and specific sera, ELISA screening against peptide-BSA conjugate, delivery of lyophilized pre-immune serum, lyophilized specific serum, free peptide and peptide-BSA conjugate.

Antibodies are delivered with detailed product report and titer guarantee.

Possibility for affinity purification or Protein-A purification of sera.

Possibility for conjugation of antibodies to enzymes or fluorochromes.

Possibility for F(ab')₂ fragmentation of antibody.

Guarantee offer 1 - Peptide antigen (P2096.0000)

A 17 amino acids long peptide is synthesized representing the protein of interest.

The peptide is purified to higher than 85% purity at a total quantity of 25mg - 30mg. Part of the peptide is conjugated to KLH, which is used for immunisation. Part of the peptide is conjugated to BSA which is used for ELISA screening (2mg peptide-KLH conjugate, 5mg peptide-BSA conjugate and 5mg free peptide are delivered together with the serum).

Two New Zealand White Rabbits are prepared for immunisation per peptide. Only rabbits bred specifically for antibody production are used for immunisation. The rabbits are kept under conditions which minimise risks for infections.

II. Services

Peptide synthesis, immunisation and serum preparation protocol

Day-1: Synthesis of a 17 amino acids long peptide representing a linear sequence from the protein of interest. At the C-terminus or N-terminus of the peptide will be added cysteine amino acid which will be used for conjugation to KLH and BSA carrier proteins.

Day-20: The raw peptide will be purified by HPLC to a purity higher than 85%. Purity will be documented in a HPLC report. The correct sequence and identity of the peptide will be verified by mass spectrometry, and a mass spectrometry report will be enclosed with the peptide.

Day 30: Part of the peptide will be conjugated to KLH carrier protein and used for immunisation. Part of the peptide will be conjugated to BSA protein and used for ELISA screening (BSA and KLH conjugated peptide will be delivered together with free peptide and serum).

Day-38: Pre-immune bleeding of 2-3mL blood per rabbit (from vein or ear edge). 0.1% sodium azide will be added to the pre-immune serum, a small part of the pre-immune serum will be used as a negative control in ELISA to verify low unspecific background reaction. The remaining quantity will be aliquoted and stored frozen until lyophilisation.

Day-40: 1st immunisation with 2mg peptide-KLH conjugate in equal volume complete Freund's adjuvans (CFA) per rabbit. The rabbits will be immunised by multipoint subcutaneous injections at the back of the animal.

Day-62: 2nd immunisation with 1mg peptide-KLH conjugate in equal volume incomplete Freund's adjuvans (IFA). The rabbits will be immunised by multipoint subcutaneous injections at the back of the animal.

Day-76: 3rd immunisation with 1 mg peptide-KLH conjugate in equal volume incomplete Freund's adjuvans (IFA). The rabbits will be immunised by multipoint subcutaneous injections at the back of the animal.

Day-86: 1 - 2mL test bleeding from vein at the ear edge. Titer will be measured by ELISA and the results will be included in the final report.

Day-96: 4th immunisation with 1mg peptide-KLH conjugate in equal volume incomplete Freund's adjuvans (IFA). The rabbits will be immunised by multipoint subcutaneous injections at the back of the animal.

Day-106: Final bleeding. 0.1% sodium azide will be added to the serum.

Day-107: The blood will be centrifuged refrigerated at 3000 rpm for 15min and serum will be isolated. A small portion of the serum will be used in ELISA, the remaining serum will be aliquoted in 1mL portions in polyethylene vials and stored frozen until lyophilisation.

Day-108: All vials will be lyophilised in freeze dryer.

Day-110: One vial will be re-dissolved in pure water and antibody titer will be measured by ELISA.

Day 115: Certificate of analysis will be made with all relevant parameters and ELISA results. Separate certificate of analysis will be prepared for the peptide with all physical parameters, HPLC and mass spectrometry results.

Day 118: (approximately four months after receipt of order):
The following will be shipped

50 - 60mL serum from two rabbits aliquoted and lyophilised in 1mL portions.

1mL lyophilised pre-immune serum.

5mg free lyophilised peptide.

5mg lyophilised peptide-BSA conjugate.

2mg lyophilised peptide-KLH conjugate.

2mg free lyophilised KLH carrier protein.

2mg free lyophilised BSA carrier protein.

Detailed certificate of analysis for peptide and antibody.

As an additional service Genaxxon bioscience offers to purify the rabbit anti-peptide serum by either Protein A or affinity chromatography purification.

Guarantee offer 2 - Protein antigen (P2097.0000)

Day-1: Pre-immune bleeding of 2-3mL blood per rabbit (from vein or ear edge). 0.1% sodium azide will be added to the pre-immune serum, a small part of the pre-immune serum will be used as a negative control in ELISA to verify low unspecific background reaction. The remaining quantity will be aliquoted and stored frozen until lyophilisation.

Day-3: 1st immunisation with 2mg peptide-KLH conjugate in equal volume complete Freund's adjuvans (CFA) per rabbit. The rabbits will be immunised by multipoint subcutaneous injections at the back of the animal.

Day-15: 2nd immunisation with 1mg peptide-KLH conjugate in equal volume incomplete Freund's adjuvans (IFA). The rabbits will be immunised by multipoint subcutaneous injections at the back of the animal.

Day-29: 3rd immunisation with 1 mg peptide-KLH conjugate in equal volume incomplete Freund's adjuvans (IFA). The rabbits will be immunised by multipoint subcutaneous injections at the back of the animal.

Day-39: 1 - 2mL test bleeding from vein at the ear edge. Titer will be measured by ELISA and the results will be included in the final report.

Day-49: 4th immunisation with 1mg peptide-KLH conjugate in equal volume incomplete Freund's adjuvans (IFA). The rabbits will be immunised by multipoint subcutaneous injections at the back of the animal.

Day-59: Final bleeding. 0.1% sodium azide will be added to the serum.

Day-60: The blood will be centrifuged refrigerated at 3000 rpm for 15min and serum will be isolated. A small portion of the serum will be used in ELISA, the remaining serum will be aliquoted in 1mL portions in polyethylene vials and stored frozen until lyophilisation.

Day-61: All vials will be lyophilised in freeze dryer.

Day-63: One vial will be re-dissolved in pure water and antibody titer will be measured by ELISA.

Day 68: Certificate of analysis will be made with all relevant parameters and ELISA results. Separate certificate of analysis will be prepared for the peptide with all physical parameters, HPLC and mass spectrometry results.

Day 71: (approximately two and a half months after receipt of order)

The following will be shipped:

50 - 60mL serum from two rabbits aliquoted and lyophilised in 1mL portions.

1mL lyophilised pre-immune serum.

5mg lyophilised protein-BSA conjugate.

2mg lyophilised protein-KLH conjugate.

2mg free lyophilised KLH carrier protein.

2mg free lyophilised BSA carrier protein.

Detailed certificate of analysis for peptide and antibody.

As an additional service Genaxxon bioscience offers to purify the rabbit anti-peptide serum by either Protein A or affinity chromatography purification.