

Pen peptide certificate of analysis (CoA)

Product:	AC-SEMAX-NH2		
Source:	Hybrid synthesis (recombinant using peptide secretion system and chemical synthesis)		
Intended use:	For stability, viability and activity testing only.		
Order number:		Lot:	25AUG25MAX
Production:	08/2025	Expiry:	08/2027
Formulation:	0.2 µm-filtered solution in 20mM glycine, 200mM Mannitol, 20mM NaH ₂ PO ₄ , pH 5.6; m-cresol 1 mg/ml, glycerol 2 mg/ml (when liquid)		
Protein/peptide concentration per 3 ml cartridge:	15 mg		

Release Testing:	Specification	Lot Result
Purity:	≥ 97%	> 98%
Identity:	Complies	Complies
Sterility:	Sterile	Complies
Endotoxin level:	< 10 EU/mg	< 0.20 EU/mg
Host-cell DNA	≤ 200 ng/mg	Complies (1.1 ng/mg)

Activity was determined using a Nb2-11 cell proliferation assay.

Purity was determined by SDS PAGE and coomassie stain (under reducing and non-reducing conditions).

Identity was confirmed by *end-of-production* DNA sequencing and N-terminal protein sequencing.

Sterility test of vialed product was performed according to Eur.Pharm. (Inoculation method).

Endotoxin was determined using the gel clot assay according to Eur.Pharm.

Host-cell DNA was determined using fluorimetric assay.

Handling Instructions:

General usage: Open cap, clean the rubber stopper with disinfectant napkin or other cleaning disinfection method / material. Puncture rubber stopper with sterile needle by screwing needle on. Remove the plastic protective cover. Set the index to physician prescribed position, remove the pink plastic cover and let out the air from the cartridge by several button presses into the air. Put on the plastic protective cover back.

Using liquid product: Liquid products are ready to use according to physician recommendations.

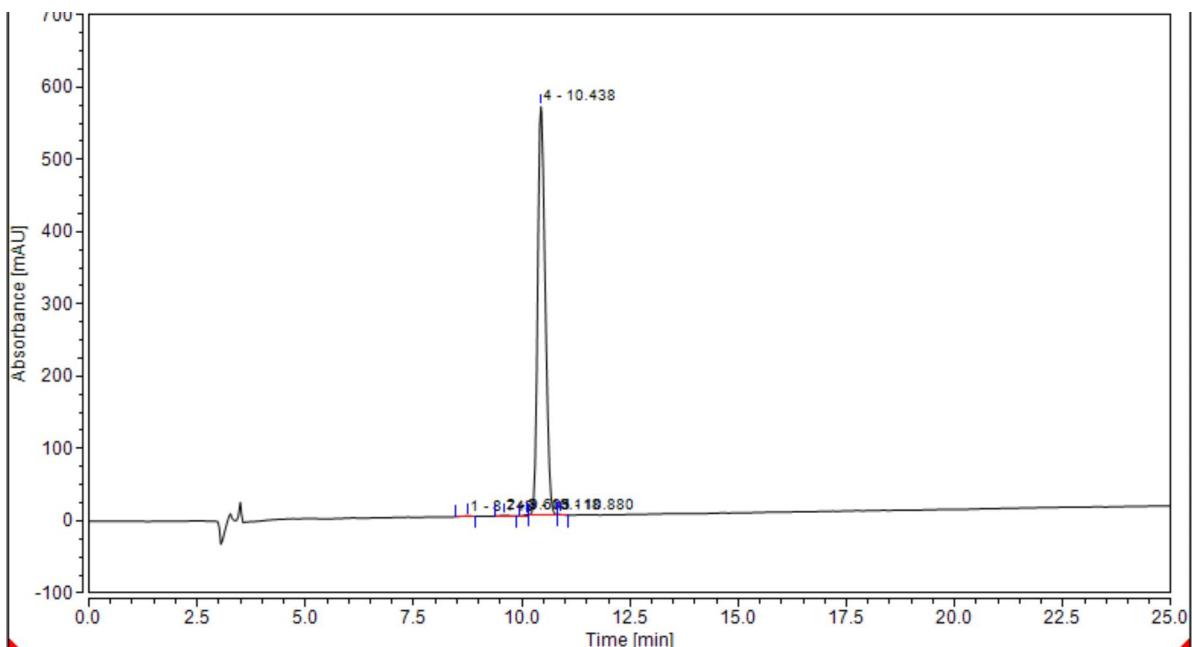
Storage and stability: Store material at +2 - +8°C. **Do not freeze!**

Quality Statement:

This product is manufactured, tested and realized in compliance with the relevant GMP-guidelines. No animal- or human-derived materials were used during manufacturing. USP chapter <1043> “ancillary materials for cell, gene, and tissue-engineered product” has been considered in the design of this product.

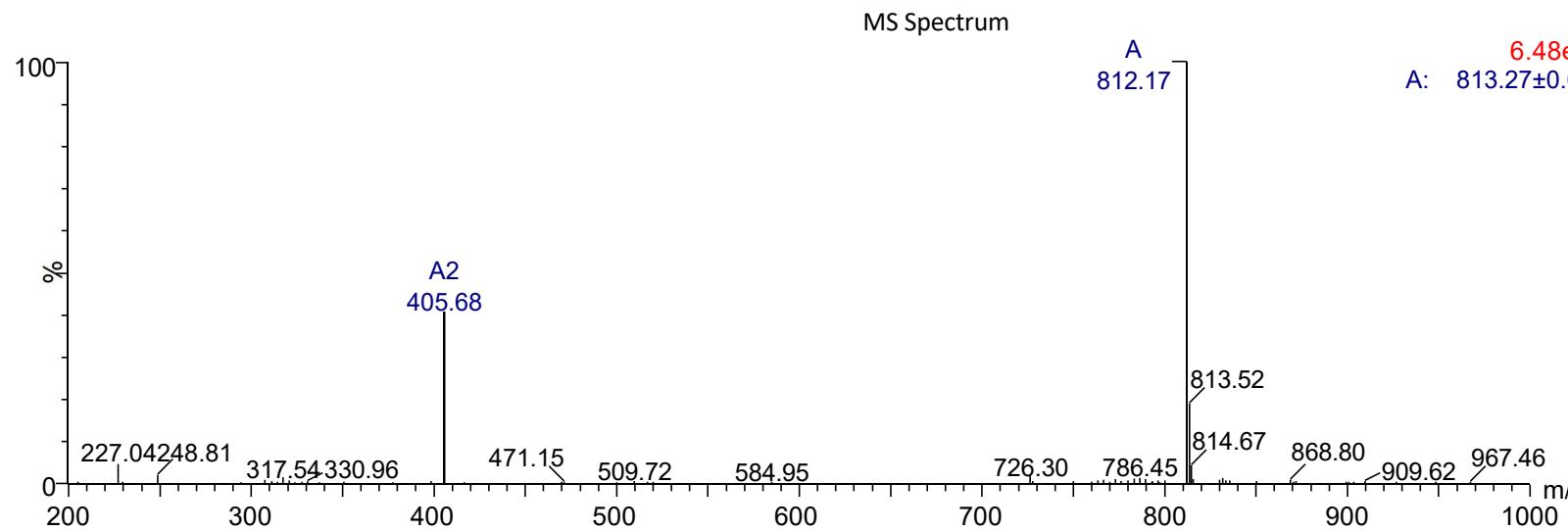
Sample Information

Product Name : Semax
Lot. No : 202508
Sequence : Met-Glu-His-Phe-Pro-Gly-Pro
Column : Welch,XB-C18,(4.6mm i.d.,250 mm L)
Buffer : A: 0.1% TFA in Acetonitrile B: 0.1% TFA in H₂O
Gradient : 15-40% in 25min
Flow rate : 1.0ml/min
Wavelength : 220nm
Dissolution method : 100% H₂O
Injection date : 21/08/2025 11:27:33 AM



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount n.a.
1		8.743	0.167	0.681	0.15	0.12	n.a.
2		9.603	0.184	0.718	0.16	0.13	n.a.
3		10.118	0.156	1.404	0.14	0.25	n.a.
4		10.438	113.859	565.913	99.41	99.30	n.a.
5		10.880	0.165	1.180	0.14	0.21	n.a.
Total:		114.532	569.896	100.00	100.00		



Dissolution	:0.1%HCOOH+ACN	Interface	:ESI	Prerod Bias	:+3.5kv
Date	:2025/08/21 15:59:45	Nebulizing Gas Flow	:500L/hr	Detector	:-0.2kv
Injection	:2.5ul	CDL Temp	:400C	T.Flow	:0.35ml/min
Block Temp	:150	CDL Volt	:-15v	B.conc	:50%H2O/50%MEOH

Product Name	:	Semax
Sequence	:	MEHFPGP
Lot.No	:	2508
Theoretical	:	813.92
Observed	:	813.36