

Certificate of Analysis

Cortexin – 10 mg

Product : Cortexin
Lot number : 3650824
Analysis date : 2025-07-09
Method : nanoHPLC-MS Proteomics
Description : vial containing white lyophilized powder
Extractable Vol. : Added 5 ml water, extracted 4.9 ml
pH : 6.0 after resuspension

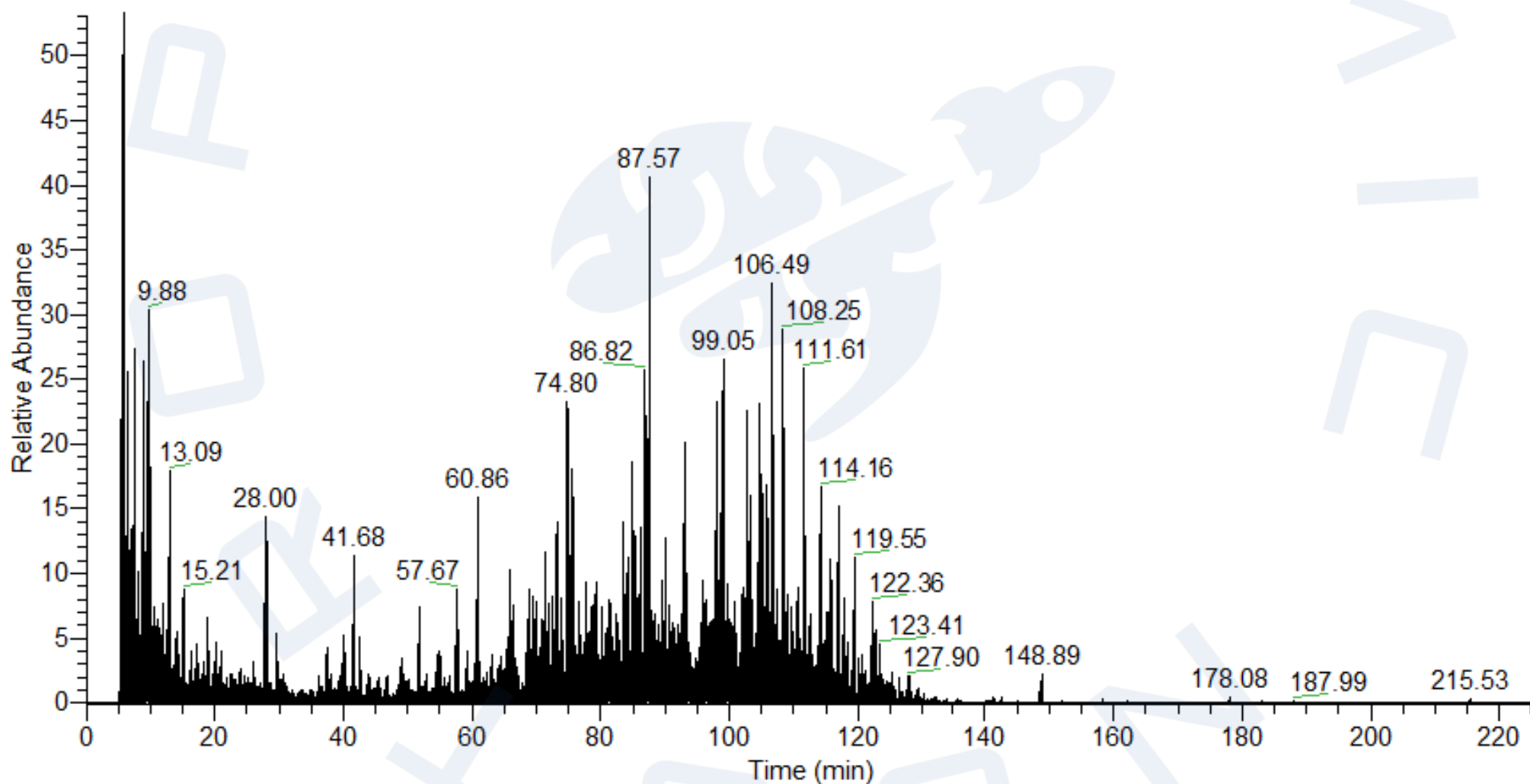
Client : CosmicNootropic

Nano High Performance Liquid Chromatography (HPLC) – Mass Spectrometry (MS)

Cortexin_Geropharm_3650824

06/27/25 11:16:23

RT: 0.00 - 225.01



Cortexin consists of hundreds to thousands of small molecules and peptides generated by the hydrolysis of bovine cerebral cortex tissue.

Peptides and their parent proteins can be identified from complex samples using proteomics. Proteomics uses the fragmentation function of a mass spectrometer to isolate and fragment molecules as they are separated by the HPLC, in this case a nanoHPLC to increase sensitivity. Fragmentation provides sequence information that can be used by various software to identify peptides. The chromatogram above represents the detected compounds that were fragmented by the mass spec over the course of a 225 minute analysis.

Analysis Performed by
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2025-07-16

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Analysis Results

Fragments of 143 proteins were detected using the bovine (*Bos taurus*) database from UniProt.org. 578 different peptide sequences were identified by the analysis. 125 proteins have published evidence of cerebral cortex expression.

Selected cerebral cortex related proteins identified in the analysis include:

tr|A0A3Q1LMZ3|A0A3Q1LMZ3_BOVIN Neurofascin

1 peptide identified

YKKGGDLPSDKAKFEN

tr|A0A3Q1MRJ3|A0A3Q1MRJ3_BOVIN Myelin basic protein

14 peptides identified

FSWGAEGQKPG, GAEGQKPGFGYGGRA, GAEGQKPGFGYGGRAS, IVTPRTPPPS, IVTPRTPPPSQ, IVTPRTPPPSQGKG, IVTPRTPPPSQGKGRG, IVTPRTPPPSQGKGRGLS, IVTPRTPPPSQGKGRGLSLS, LSRFSWGAEGQKPG, NIVTPRTPPPSQGKG, RTTHYGSLPQKAQGHRPQDENPV, SLPQKAQGHRPQDENPVVH, YGGRASDYKSAHKGLKGHDAQGTLS

sp|P13696|PEBP1_BOVIN Phosphatidylethanolamine-binding protein 1

12 peptides identified

DYVGSGPPKGTGLHR, GKVLTPQVKNRPTS, PVDLSKWSGPL, QEVDERPQHPLQ, SDYVGSGPPKGTGLHRY, SDYVGSGPPKGTGLHRYV, SGPPKGTGLHRY, VVNMKGNNISSG, VVNMKGNNISSGTV, YVGSGPPKGTGLHR, YVGSGPPKGTGLHRY, YVGSGPPKGTGLHRYV

sp|P31836|NCAM1_BOVIN Neural cell adhesion molecule 1

1 peptide identified

VVAENQQGKSAAH

sp|P48018|SYT1_BOVIN Synaptotagmin-1

1 peptide identified

DYDKIGKNDIAIGK

tr|A0AAA9RS01|A0AAA9RS01_BOVIN Synaptosome associated protein 91

6 peptides identified

ESAPEVAPAPKPEAAPS, FATASAAVPVSTSKPSS, FESAPEVAPAPKPEAAPS, SAPEVAPAPKPEAAPS, TASAAPVSTSKPSS, VAPSPATTASPAKVDS

tr|A6QNW4|A6QNW4_BOVIN Synapsin-1

1 peptides identified

ALHGKDGRDHIE, VEALHGKDGRDHIE

Bovine species source – CONFIRMED

Cerebral cortex source – CONFIRMED

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