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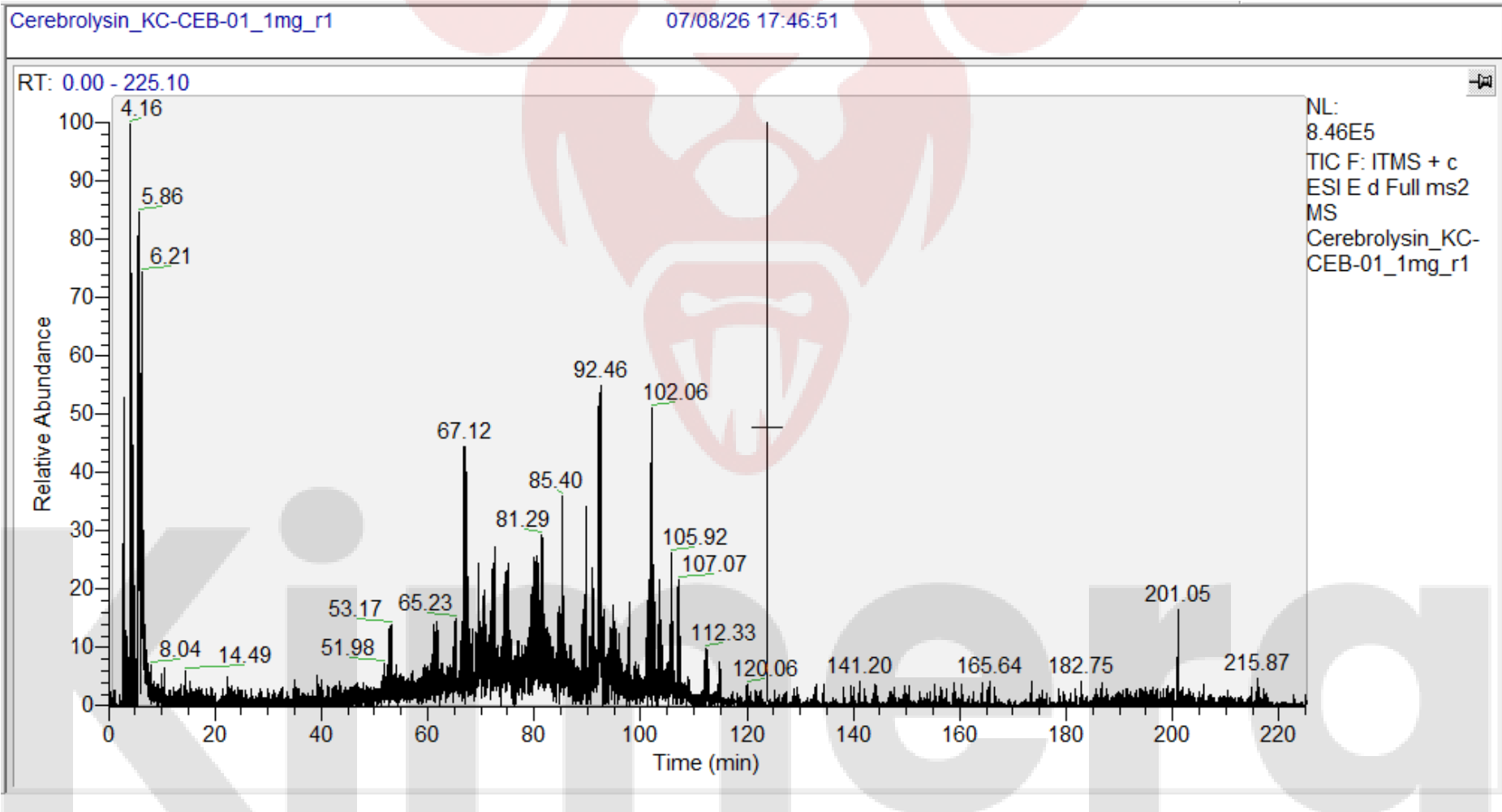
# Certificate of Analysis

## Cerebrolysin

**Product** : Cerebrolysin  
**Lot number** : KC-CEB-01  
**Analysis date** : 2026-08-10  
**Method** : nanoHPLC-MS Proteomics / UPLC-UV  
**Identification** : Confirmed  
**Measured**  
**Concentration** : 257 mg/ml

**Client** : Kimera Chems  
[Kimerachems.co](http://Kimerachems.co)

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



Cerebrolysin consists of hundreds to thousands of small molecules and peptides generated by the enzymatic hydrolysis of porcine brain tissue.

Peptides and their parent proteins can be identified from complex hydrolysates 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.

#### Quantification by UPLC-UV

| Replicates                            | mg/ml      |
|---------------------------------------|------------|
| Cerebrolysin 215mg KC-CEB-01 100xd r1 | 250        |
| Cerebrolysin 215mg KC-CEB-01 100xd r2 | 263        |
| Cerebrolysin 215mg KC-CEB-01 100xd r3 | 262        |
| <b>Average mg/ml</b>                  | <b>257</b> |

Analysis Performed by  
Ken Pendarvis, ChE  
Analytical Chemist  
MZ Biolabs  
[contact@mzbiolabs.com](mailto:contact@mzbiolabs.com)

  
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## Analysis Results

46 peptides from cerebral tissue expressed proteins were identified from a porcine (*Sus scrofa*) database from UniProt.org. This confirms the tissue source was indeed porcine cerebrum.

**Identified cerebral peptides / proteins. More information can be found at Uniprot.org using the accessions listed below.**

Cell adhesion molecule 2 (Accession A0A5G2QAH4)

**2 peptides identified**

KIIPSTPFPQEGQPLI, KIIPSTPFPQEGQPLIL

Contactin-1 (Accession A0A287B9Q3)

**3 peptides identified**

ALGNPVPDIRW, IPLIPLPERTTKPYPAD, VVRGPPGPPGGL

Dihydropyrimidinase-related protein 2 (Accession A0A4X1VC81)

**7 peptides identified**

GITGPEGHVLSRPEE, IIDHVVPEPGTS, IIDHVVPEPGTSL, IKGGKIVNDDQSF, LGITGPEGHVLSRPEE, VTSPPLSPDPTTPDF, VVTGKMDENQF

Glial fibrillary acidic protein (Accession A0A287A1W4)

**3 peptides identified**

AQQQVHVEM, DQLTANGARL, EEEGQSLKDEM

Glutathione S-transferase P (Accession P80031)

**1 peptide identified**

VKELPEHLKPFETL

Myelin basic protein (Accession P81558)

**16 peptides identified**

AQHGRPQDENPVVHF, ASQKRPSQRHGSKY, FSWGAEGQKPGFGY, GAEGQKPGFGY, GGRAPDYKPAHKGLKGAQ  
GGRAPDYKPAHKGLKGAQDAQGTL, GRPQDENPVVHF, GSLPQKAQHGRPQDENPVVHF, PQKAQHGRPQDENPVVHF  
QKAQHGRPQDENPVVHF, RPQDENPVVHF, SRFSWGAEGQKPGFGY, SWGAEGQKPGF, SWGAEGQKPGFG  
SWGAEGQKPGFGY, WGAEGQKPGFGY

Myelin proteolipid protein (Accession Q712P7)

**4 peptides identified**

INVIHAFQ, PSKTSASIGSL, YTTGAVRQIFGD, YTTGAVRQIFGDY

Myelin-associated glycoprotein (Accession A0A5G2QRY2)

**3 peptides identified**

FNSPYPKNYPPVV, FNSPYPKNYPPVVF, SWLGHEGLGEPVAVL

Myelin-oligodendrocyte glycoprotein (Accession A0A5G2RMA3)

**1 peptide identified**

LKETIGEGKVTL

Neural cell adhesion molecule 1 (Accession A0A287AU28)

**1 peptide identified**

DEPEATGGVPIL

Neurofilament medium chain (Accession A0A5G2QW19)

**1 peptide identified**

KEQIQGLNDRF

Continued on next page

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Spectrin beta chain (Accession A0A286ZNC7)

**1 peptide identified**

IANYRPTIDSL

Synapsin-1 (Accession B7TY10)

**1 peptide identified**

PLIGDHQDEDKQL

Synaptophysin (Accession F1RW46)

**1 peptide identified**

AAPFLRAPPGAPEKQPAPGDA

Tenascin-R (Accession A0A481CFE3)

**1 peptide identified**

GLVGGEKGKTF

**Porcine species source – CONFIRMED**

**Cerebrum tissue source – CONFIRMED**

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