

CERTIFICATE OF ANALYSIS

Livagen

Product name	Livagen	Molecular formula	C ₁₈ H ₃₁ N ₅ O ₉
Batch number	-	Molecular weight	461.47 g/mol
CAS number	N/A	Quantity	20 mg
Date of manufacture	-	PubChem CID	N/A
Storage	Powder: -20°C 3 years; 4°C 2 years; 15°C 3 months.		In solvent: -80°C 6 months; -20°C 1 month; 10°C 1 week

Amino acid sequence

H-Lys-Glu-Asp-Ala (Lys-Glu-Asp-Ala)

4 residues

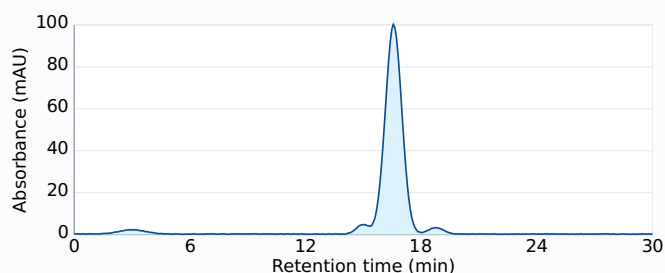
Analytical results

Test parameter	Method	Specification	Result	Status
Appearance	Visual	White to off-white powder	Conforms	✓
Peptide purity	RP-HPLC (C18)	≥ 98.0%	98.8%	✓
Molecular weight confirmation	ESI-MS	461.47 ± 1.0 Da	Conforms	✓
Water content	Karl Fischer	≤ 10.0%	5.9%	✓
Counter-ion content	HPLC	Acetate salt (report)	9.3% (acetate)	✓
Total related substances	RP-HPLC	≤ 2.0%	1.2%	✓
Largest single impurity	RP-HPLC	≤ 1.0%	0.35%	✓
Residual solvent — Acetonitrile	GC-HS	≤ 410 ppm	< 410 ppm	✓
Residual solvent — DCM	GC-HS	≤ 600 ppm	< 600 ppm	✓
Residual solvent — DMF	GC-HS	≤ 880 ppm	< 880 ppm	✓
Bacterial endotoxins	LAL kinetic turbidimetric	< 5 EU/mg	< 0.5 EU/mg	✓
Bioburden	USP <61>	< 100 CFU/g (USP <61>)	< 10 CFU/g	✓

HPLC chromatogram

RP-HPLC C18

UV detection at 220 nm — gradient 10–70% ACN in 0.1% TFA over 30 min — flow 1.0 mL/min

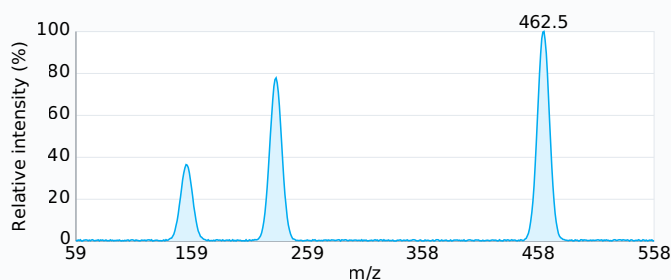


Main peak RT 16.57 min · Area 98.8% · Largest imp 0.35% · Total related 1.2%

Mass spectrum

ESI-MS positive

Electrospray ionisation — positive mode

Observed [M+H]⁺ 462.5 · MW 461.47 g/mol

✓ Overall result: Conforms to specification

Results relate only to the batch tested, by the stated methods at time of release, and are provided in good faith without warranty — OP Labs does not guarantee the accuracy or completeness of the results. Storage figures are recommendations, not stability data. Research use only.