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CERTIFICATE OF ANALYSIS

MOTS-c Batch [redacted] January 2026

Product name	**MOTS-c**	Molecular formula	**$C_{101}H_{152}N_{28}O_{22}S_2$**
Batch number	[redacted]	Molecular weight	**2174.64 g/mol**
CAS number	**1627580-64-6**	Quantity	**10 mg**
Date of manufacture	**January 2026**	PubChem CID	**146675088**
Storage	**Powder: −20°C 3 years; 4°C 2 years; 15°C 3 months.**	Storage	**In solvent: −80°C 6 months; −20°C 1 month; 10°C 1 week**

Amino acid sequence

H–Met–Arg–Trp–Gln–Glu–Met–Gly–Tyr–Ile–Phe–Tyr–Pro–Arg–Lys–Leu–Arg

16 residues

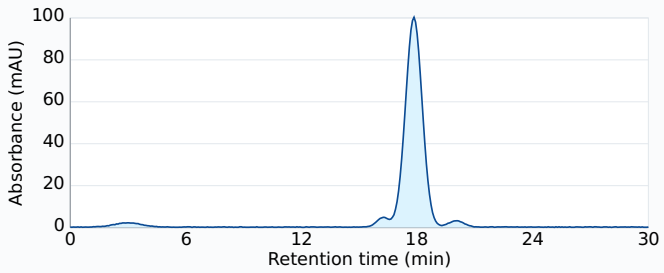
Analytical results

Test parameter	Method	Specification	Result	Status
Appearance	Visual	White to off-white powder	**Conforms**	✓
Peptide purity	RP-HPLC (C18)	≥ 98.5%	**98.64%**	✓
Molecular weight confirmation	ESI-MS	2174.64 ± 1.0 Da	**Conforms**	✓
Water content	Karl Fischer	≤ 10.0%	**4.5%**	✓
Counter-ion content	HPLC	TFA ≤ 0.50% (acetate salt)	**7.9% (acetate)**	✓
Total related substances	RP-HPLC	≤ 2.0%	**0.8%**	✓
Largest single impurity	RP-HPLC	≤ 1.0%	**0.5%**	✓
Residual solvent — Acetonitrile	GC-HS	≤ 410 ppm	**< 460 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

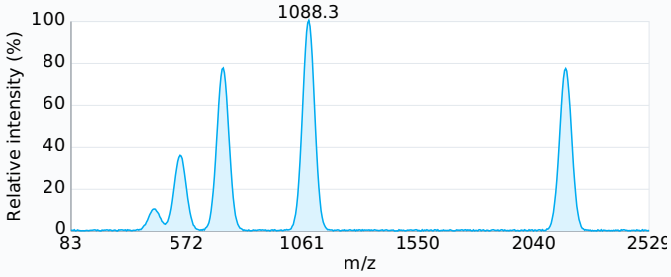


Main peak RT **17.83 min** · Area **98.64%** · Largest imp 0.5% · Total related 0.8%

Mass spectrum

ESI-MS positive

Electrospray ionisation — positive mode



Observed **[M+2H]2+ 1088.3** · MW **2174.64 g/mol**

✓ Overall result: Conforms to specification