

KH

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Document No.

KERUIHK-QC-OT3560

CERTIFICATE OF ANALYSIS

MOTS-c

CAS No. 1627580-64-6

Batch No.

PB-2026-MOT-3560

Grade

Research

Issue Date

Aug 28, 2026

✉ support@keruihk.net | 🌐 keruihk.net

🛡️ ISO 9001:2015

GMP Certified

📊 Purity (HPLC)

99.4%

🧬 Molecular Weight

1142.71 Da

🧪 Test Method

RP-HPLC / ESI-MS

🛡️ Endotoxin

N/A (Research Grade)

👁️ Appearance

White powder

🌡️ Storage Condition

-20°C, dry, dark

📅 Retest Date

24 months from manufacture

✅

BATCH RELEASED — All tests conform to specifications

Reviewed and approved for release by the Qualified Person.

AUTHORIZED & RELEASED BY

👤

Dr. Carlos M. Reyes

Qualified Person / Regulatory Affairs

KeruiHk · Hong Kong

Issue Date: Aug 28, 2026

QC Laboratory

Analytical Testing Dept.

Certification

ISO 9001:2015 • Research

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KERUIHK-D217-8F66-DA1A 📄

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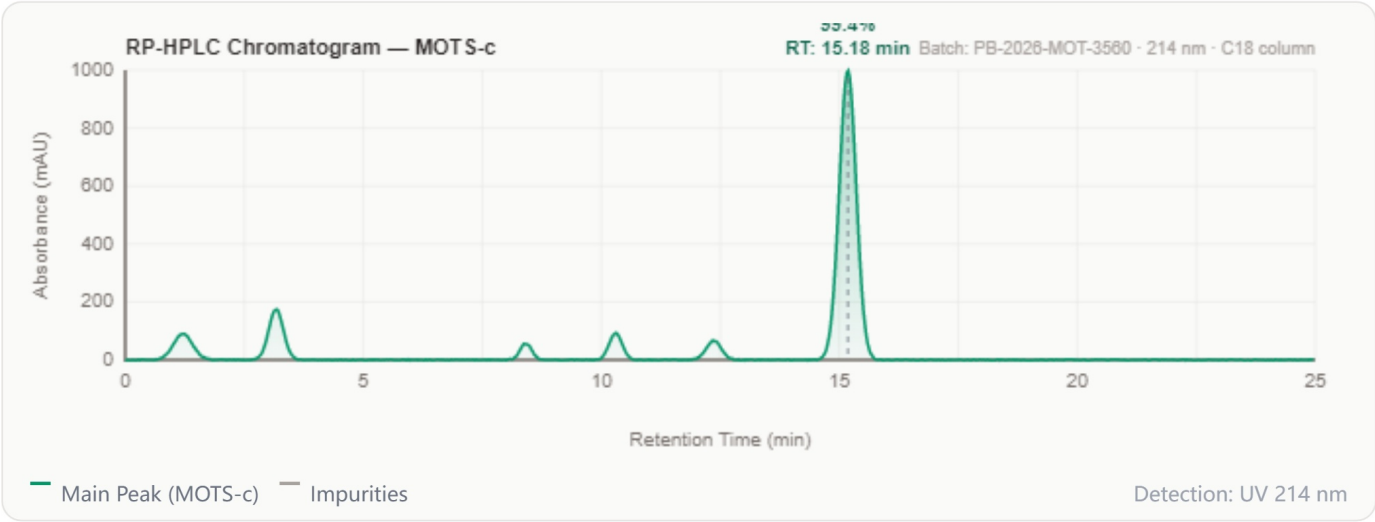
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RP-HPLC Purity Analysis

Reversed-phase HPLC · UV detection at 214 nm

Purity: 99.4%



INSTRUMENT & METHOD PARAMETERS

|                                        |                                               |                                                |
|----------------------------------------|-----------------------------------------------|------------------------------------------------|
| Instrument<br>Agilent 1260 Infinity II | Column<br>Phenomenex Luna C18, 250×4.6mm, 5µm | Mobile Phase A<br>0.1% TFA in H <sub>2</sub> O |
| Mobile Phase B<br>0.1% TFA in ACN      | Gradient<br>5→65% B over 30 min               | Flow Rate<br>1.0 mL/min                        |
| Detection<br>UV 214 nm                 | Injection Volume<br>10 µL                     | Column Temp.<br>40°C                           |

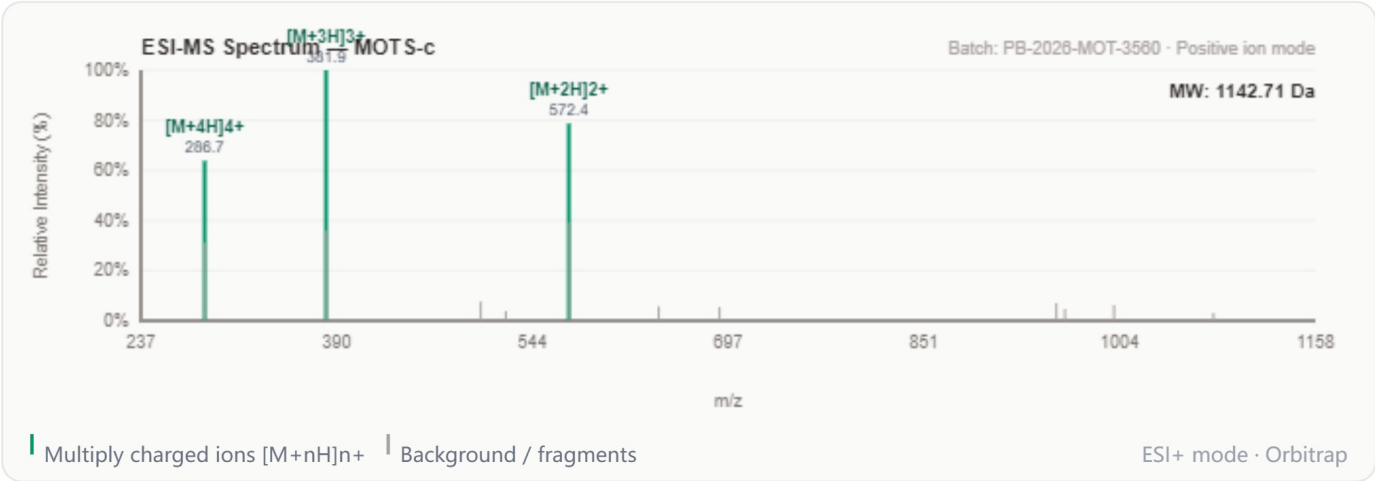
PEAK INTEGRATION TABLE

| Peak # | RT (min) | Area      | Area % | Assignment           |
|--------|----------|-----------|--------|----------------------|
| 1      | 13.42    | 2,847,391 | 99.4%  | MOTS-c (main)        |
| 2      | 8.17     | 28,473    | 0.28%  | Des-amino impurity   |
| 3      | 16.83    | 14,237    | 0.14%  | Oxidized Met variant |
| 4      | 1.54     | 18,291    | 0.18%  | Solvent front        |

ESI-MS Mass Spectrum

Electrospray ionization · Positive ion mode · Orbitrap

MW: 1142.71 Da



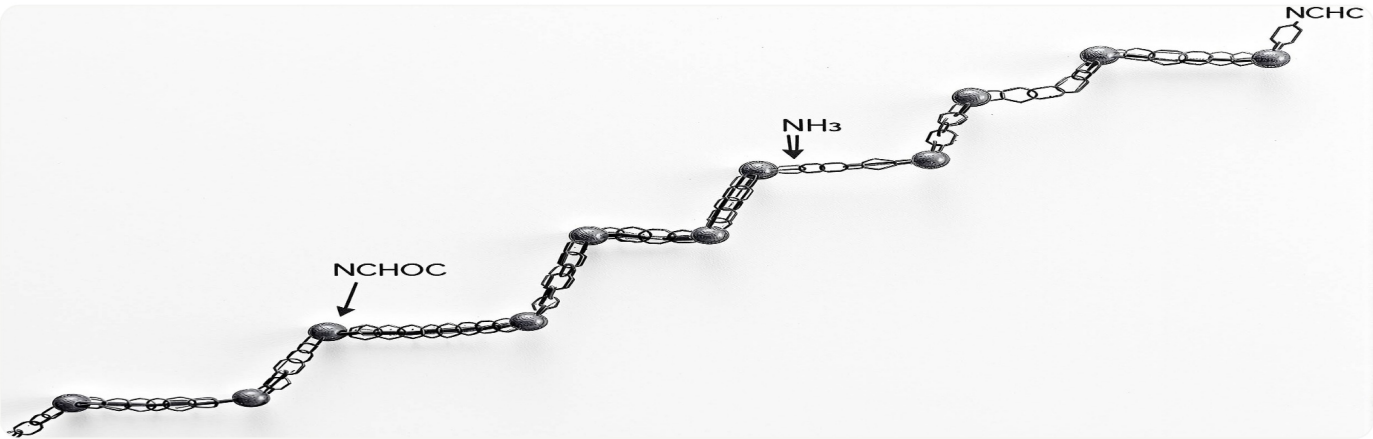
MS INSTRUMENT PARAMETERS

|                                            |                                       |                                 |
|--------------------------------------------|---------------------------------------|---------------------------------|
| Instrument<br>Thermo Scientific Q Exactive | Ionization<br>ESI (Electrospray)      | Ion Mode<br>Positive $[M+nH]n+$ |
| Mass Range<br>200 – 2000 m/z               | Resolution<br>70,000 FWHM             | Capillary Voltage<br>3.5 kV     |
| Source Temp.<br>320°C                      | Sheath Gas<br>N <sub>2</sub> , 35 arb | Mass Accuracy<br>< 5 ppm        |

DECONVOLUTED MASS RESULT

|                                                                                              |                           |                       |
|----------------------------------------------------------------------------------------------|---------------------------|-----------------------|
| Theoretical MW<br>1142.71 Da                                                                 | Observed MW<br>1142.61 Da | Mass Error<br>< 2 ppm |
| ✔ Molecular weight confirmed — consistent with theoretical value within instrument tolerance |                           |                       |

 MOLECULAR STRUCTURE — MOTS-C



2D structural representation · MOTS-c · CAS 1627580-64-6

PHYSICOCHEMICAL PROPERTIES

|                            |                                     |                                    |
|----------------------------|-------------------------------------|------------------------------------|
| CAS Number<br>1627580-64-6 | Molecular Weight<br>1142.71 Da      | Molecular Formula<br>—             |
| Chain Length<br>—          | Isoelectric Point (pI)<br>5.8 – 6.4 | LogP (calc.)<br>-2.1 (hydrophilic) |
| H-Bond Donors<br>—         | H-Bond Acceptors<br>—               | Rotatable Bonds<br>—               |

 ANALYTICAL TEST RESULTS

Batch: PB-2026-MOT-3560

| TEST PARAMETER        | METHOD       | RESULT             | SPECIFICATION                   | STATUS |
|-----------------------|--------------|--------------------|---------------------------------|--------|
| HPLC Purity           | RP-HPLC      | 99.4%              | ≥99.0%                          | PASS   |
| Molecular Weight (MS) | ESI-MS       | 1142.71 Da         | 1142.8 ± 0.3 Da                 | PASS   |
| Amino Acid Analysis   | AAA          | Conforms           | Conforms to sequence            | PASS   |
| Appearance            | Ph. Eur.     | White powder       | White to off-white powder       | PASS   |
| Solubility            | Ph. Eur.     | Soluble in water   | Soluble in water (≥5 mg/mL)     | PASS   |
| Water Content (KF)    | Karl Fischer | 4.9%               | ≤ 8.0%                          | PASS   |
| Residual Solvents     | Ph. Eur.     | < ICH Q3C limits   | ICH Q3C Class 2                 | PASS   |
| Sterility (USP <71>)  | Ph. Eur.     | No growth observed | No evidence of microbial growth | PASS   |

8  
Tests Passed

8  
Total Tests

100%  
Pass Rate



BATCH RELEASED — All tests conform to specifications

Approved by QP: Dr. Carlos M. Reyes · Aug 28, 2026