PrymaLab
PRYMALAB ANALYTICAL · IN-HOUSE LABORATORY
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CERTIFICATE NO.
PL-26-00066
VERIFICATION KEY
QQS5P27Y
Scan or enter both at prymalab.net/testing/verify

CERTIFICATE OF ANALYSIS · LOT RELEASE

MT-2 (Melanotan II acetate) 10 mg

Lot **PL-2609-066** · Lyophilized powder · Label claim **10 mg/vial**

TESTED IN-HOUSE BY PRYMALAB
In-house analytical result, not an independent third-party test

LOT / BATCH NUMBER	DATE MADE	DATE OF ANALYSIS	DATE ISSUED
PL-2609-066	2026-09-18	2026-09-19	2026-10-03
RETEST / EXPIRY	**UNITS IN LOT / SAMPLED**	**STORAGE**	**CERTIFICATE TYPE**
2028-09-18	250 / 2	−20 °C, desiccated, dark	Lot COA, 2 pages

COMPOUND	CAS NUMBER	MOLECULAR FORMULA	THEORETICAL MASS (AVG.)
Melanotan II (acetate) Ac-Nle-cyclo[Asp-His-D-Phe-Arg-Trp-Lys]-NH_2; supplied as the acetate salt, values quoted for the free peptide	121062-08-6	$C_{50}H_{69}N_{15}O_9$	1024.2 Da

SEQUENCE
`Ac-Nle-cyclo[D-H-[D-Phe]-R-W-K]-NH₂ (7 residues; Asp–Lys side-chain lactam; N-acetyl; C-terminal amide)`

PURITY · RP-HPLC, AREA %
99.81%
Specification 99.0% • main peak at 5.08 min

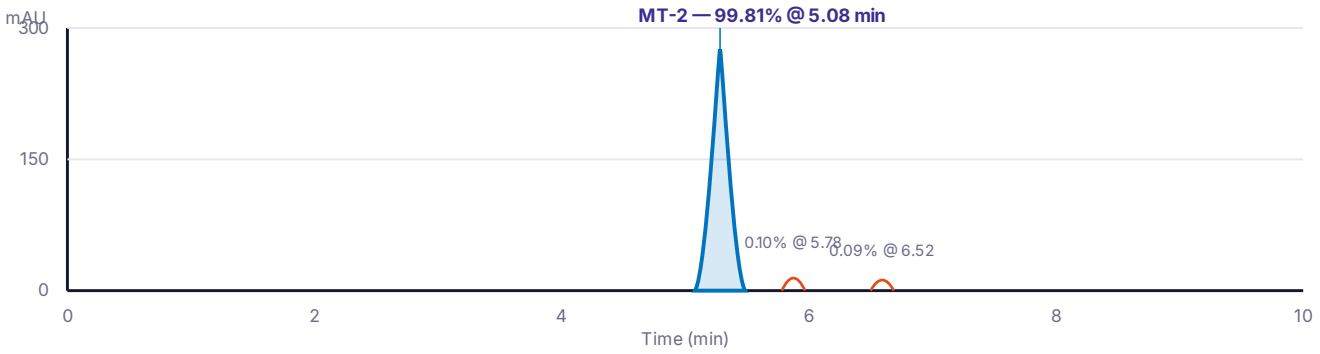
IDENTITY · OBSERVED MASS
1024.4 Da
Theoretical 1024.2 Da • +0.2 Da (195 ppm)

OVERALL CONCLUSION
PASS
Meets every specification for the tests performed

TEST	METHOD	SPECIFICATION	RESULT	CONCLUSION
Appearance	Visual inspection	White to off-white lyophilized powder	White lyophilized powder	PASS
Identity (mass)	LC-MS, ESI positive	Theoretical ± 1.0 Da	1024.4 Da	PASS
Purity	RP-HPLC, UV 214 nm, area%	99.0%	99.81%	PASS
Largest impurity	RP-HPLC, area%	1.0%	0.10% at 5.78 min (ring-opened lactam)	PASS
Water content	Karl Fischer	5.0%	1.8%	PASS
Bacterial endotoxin	LAL, kinetic	≤ 5.0 EU/mg	0.03 EU/mg	PASS
Sterility / bioburden	USP <71>, membrane filtration	No growth after 14 days	No growth; conforms	PASS

1 HPLC CHROMATOGRAM

Data file: MT2_PL-2609-066_20260919_01 · Column C18 150 × 4.6 mm · UV 214 nm



Baseline uncropped; main peak and impurities labeled with retention times. Peak table on page 2.

For laboratory research use only. Not for human or veterinary use.

2 HPLC METHOD · MT2_PL-2609-066_20260919_01

INSTRUMENT Waters Alliance e2695, SN E2695B742	DATA SYSTEM Empower 3, Build 3471	DETECTOR Waters 2998 PDA
DETECTION WAVELENGTH 214 nm	COLUMN C18, 150 × 4.6 mm, 3.5 µm	COLUMN PART / SERIAL 186003326 / USHX18211
MOBILE PHASE A 0.1% TFA in water	MOBILE PHASE B 0.1% TFA in MeCN	FLOW RATE 1.0 mL/min
COLUMN TEMPERATURE 30 °C	INJECTION VOLUME 20 µL	RUN TIME 10 min
SAMPLE DILUENT Water, 0.1% TFA	SAMPLE CONCENTRATION 0.5 mg/mL	BLANK INJECTED Yes
REFERENCE STANDARD In-house MT-2 reference, lot PL-RS-MT2-01, RT 5.06 min		

3 GRADIENT PROGRAM

TIME (MIN)	% A	% B
0.0	95	5
3.0	95	5
7.0	55	45
8.0	20	80
9.0	20	80
10.0	95	5

4 PEAK TABLE

PEAK	RT (MIN)	AREA	AREA %
1	**5.08**	**4,291,830**	**99.81**
2 (ring-opened lactam)	5.78	4,300	0.10
3	6.52	3,870	0.09
Total		4,300,000	100.00

Threshold 0.05% area · Blank subtracted: Y · Purity = main peak area ÷ total integrated area × 100, to two decimals; main peak shaded.

5 IDENTITY BY MASS SPECTROMETRY

INSTRUMENT Waters Acquity SQD	IONIZATION / MODE ESI, positive	OBSERVED M/Z (CHARGE) 1025.1 (1+ [M+H]) · 513.2 (2+ [M+2H])
DECONVOLUTED MASS 1024.4 Da	THEORETICAL MASS 1024.2 Da (free-base cyclic heptapeptide)	DIFFERENCE +0.2 Da (195 ppm)
DATA FILE MT2_PL-2609-066_MS_20260919_01	ACCEPTANCE Within ± 1.0 Da	

6 ADDITIONAL TESTS

TEST	PERFORMED BY	DATE	REPORT / FILE
Water content	PrymaLab	2026-09-20	RPT-KF-PL-2609-066
Endotoxin	PrymaLab	2026-09-21	RPT-ET-PL-2609-066
Sterility	PrymaLab	2026-10-02	RPT-ST-PL-2609-066
Peptide content (acetate-salt basis)	PrymaLab	2026-09-20	RPT-AA-PL-2609-066

A test with no row here was not performed on this lot. Outside-laboratory reports, when used, are attached and named below.

7 REVIEW AND APPROVAL

D. Reynolds
Analyst · performed the testing
Date: 2026-09-19

S. Calloway
Reviewer · checked against raw data
Date: 2026-10-02

M. Phelps
Lab Director · approved for release
Date: 2026-10-03

Raw data retained at: Empower 3 (Build 3471), project PL-2609, archive PL-ARC-2026; 7 years. Outside laboratory reports attached: None

This certificate applies only to the lot named above and describes the units sampled from it; it is not a guarantee for any other lot. Results were obtained by PrymaLab LLC's own laboratory (PrymaLab Analytical) and are not an independent third-party test unless an outside report is attached. Reference values (CAS, formula, theoretical mass, sequence) are literature values for the named compound. Authenticity: scan the QR code or enter certificate number PL-26-00066 and key QQS5P27Y at prymalab.net/testing/verify; any copy that does not match the record shown there is not a PrymaLab certificate. PrymaLab LLC products are supplied for laboratory research use only and not for human or veterinary use.