Mesa Research

CERTIFICATE OF ANALYSIS · LOT RELEASE

mesaresearchco.com

CERTIFICATE NO.
PL-26-00312

VERIFICATION KEY
XCY9JG3G

Scan or enter both at prymalabnet/testing/verify

CERTIFICATE OF ANALYSIS · LOT RELEASE · ISSUED FOR MESA RESEARCH

TB-500 10 mg

Lot PL-2610-199 · Lyophilized powder · Label claim 10 mg per 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-2610-199	2026-10-07	2026-10-08	2026-10-23

RETEST / EXPIRY	UNITS IN LOT / SAMPLED	STORAGE	CERTIFICATE TYPE
2028-10-07	245 / 2	−20 °C, desiccated, dark	Lot COA, 2 pages

COMPOUND	CAS NUMBER	MOLECULAR FORMULA	THEORETICAL MASS (AVG.)
TB-500 N-acetyl thymosin β4, full-length 43-residue peptide	77591-33-4	$C_{212}H_{350}N_{56}O_{78}S$	4,963.44 Da

SEQUENCE

Ac–43–aa Tbeta4

PURITY · RP-HPLC, AREA %

99.31 %

Specification ≥ 99.0% · main peak at 14.80 min

IDENTITY · OBSERVED MASS

4,963.25 Da

Theoretical 4,963.44 Da · −0.19 Da (38 ppm)

OVERALL CONCLUSION

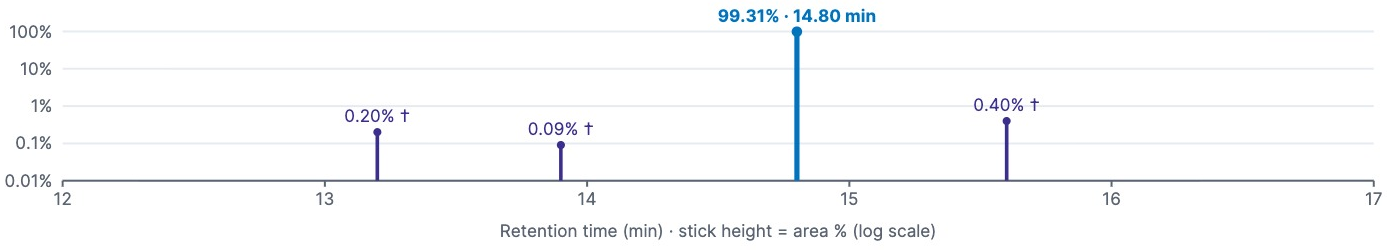
PASS

Meets every specification for the tests performed

TEST	METHOD	SPECIFICATION	RESULT	CONCLUSION
Identity (mass)	LC-MS, ESI positive	Theoretical ± 1.0 Da	4,963.25 Da	PASS
Purity	RP-HPLC, UV 214 nm, area%	≥ 99.0%	99.31%	PASS
Largest impurity	RP-HPLC, area%	≤ 1.0 %	0.40% (RT 15.60)	PASS
Water content	Karl Fischer	≤ 5.0%	3.02%	PASS
Bacterial endotoxin	LAL, kinetic	≤ 5.0 EU/mg	0.043 EU/mg	PASS
Sterility	USP <71>, 14-day	No growth	No growth	PASS

1 HPLC CHROMATOGRAM

Data file: PL-2610-199-HPLC.raw · Column C18, 150 × 4.6 mm · UV 214 nm



Peak plot drawn from the integrated peak table (area %, log scale); it is not the instrument trace, which is retained in PL-2610-199-HPLC.raw. † Nominal reference retention time for the assigned impurity; the main-peak RT is observed in this lot.

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

2 HPLC METHOD · PL-2610-199-HPLC.RAW

INSTRUMENT Waters Alliance e2695	DATA SYSTEM Empower 3	DETECTOR UV absorbance
DETECTION WAVELENGTH 214 nm	COLUMN C18, 150 × 4.6 mm, 3.5 µm	MOBILE PHASE A 0.1% TFA in water
MOBILE PHASE B 0.1% TFA in MeCN	GRADIENT 5–95% B over 25 min (linear)	FLOW RATE 1.0 mL/min
COLUMN TEMPERATURE 40 °C	INJECTION VOLUME 10 µL	

3 GRADIENT PROGRAM

TIME (MIN)	% A	% B
0.0	95	5
25.0	5	95

4 PEAK TABLE

PEAK	RT (MIN)	AREA	AREA %
1	13.20 †	—	0.20
2	13.90 †	—	0.09
3	14.80	—	99.31
4	15.60 †	—	0.40
Total		—	100.00

Peaks: 1 deamidation product; 2 isoaspartate (isoasp) variant; 3 main peak (TB-500); 4 truncated sequence · Area % from the integrated peak table (absolute areas are not part of the lot-release export) · † nominal reference RT for the assigned impurity. Purity = main peak area ÷ total integrated area × 100, to two decimals; main peak shaded.

5 IDENTITY BY MASS SPECTROMETRY

INSTRUMENT Waters SQD	IONIZATION / MODE ESI, positive	REFERENCE M/Z (CHARGE) 1241.87 (4+) · 993.70 (5+)
DECONVOLUTED MASS 4,963.25 Da	THEORETICAL MASS 4,963.44 Da	DIFFERENCE −0.19 Da (38 ppm)
DATA FILE PL-2610-199-MS.d	ACCEPTANCE Within ± 1.0 Da	

6 ADDITIONAL TESTS

TEST	PERFORMED BY	DATE	REPORT / FILE
Water content (Karl Fischer)	PrymaLab Analytical	2026-10-08	—
Endotoxin (LAL, kinetic)	PrymaLab Analytical	2026-10-08	—
Sterility (USP <71>, day-14 read-out)	PrymaLab Analytical	2026-10-22	—

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: 2026-10-23

S. Calloway
Reviewer · checked against raw data
Date: 2026-10-23

M. Phelps
Lab Director · approved for release
Date: 2026-10-23

Raw data retained at: Empower 3, project PL-2610, 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. This copy is issued for Mesa Research, a distributor of the lot; the brand shown does not change the laboratory, the method or the results. Reference values (CAS, formula, theoretical mass, sequence) are literature values for the named compound. Authenticity: scan the QR code or enter certificate number PL-26-00312 and key XCY9JG3G at prymalabnet/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.