Alpha Tides

CERTIFICATE OF ANALYSIS · LOT RELEASE

alphatides.net

CERTIFICATE NO.
PL-26-00085

VERIFICATION KEY
4FNUZA3N

Scan or enter both at prymalab.net/testing/verify

CERTIFICATE OF ANALYSIS · LOT RELEASE · ISSUED FOR ALPHA TIDES

Retatrutide 40 mg

Lot **PL-2609-085** · Lyophilized powder · Label claim **40 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-2609-085	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.)
Retatrutide LY3437943; GIP/GLP-1/glucagon receptor triple agonist	2381089-83-2	$C_{221}H_{342}N_{46}O_{68}$	4731.4 Da

SEQUENCE

H-Y-Aib-QGTFTSDYSI-[αMeLeu]-LDKK(AEEA-γGlu-C20 diacid)AQ-Aib-AFIEYLLEGGPSSGAPPPS-NH_2 (39 residues; Aib2, α-methyl-Leu13, Aib20; Lys17 acylated with eicosanedioic acid via γ-Glu and AEEA; C-terminal amide)

PURITY · RP-HPLC, AREA %
99.44%
Specification 99.0 % • main peak at 8.77 min

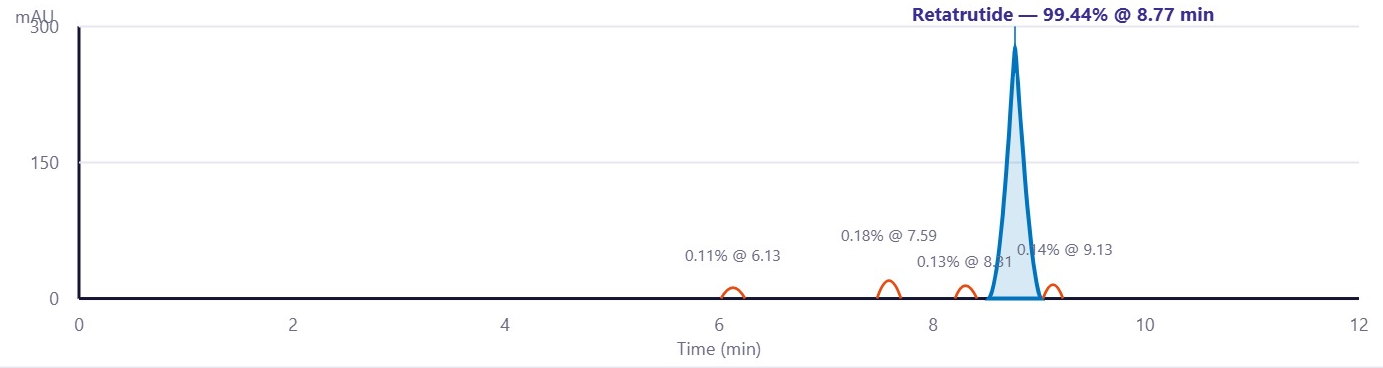
IDENTITY · OBSERVED MASS
4731.3 Da
Theoretical 4731.4 Da • −0.1 Da (−21 ppm)

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	4731.3 Da	**PASS**
Purity	RP-HPLC, UV 214 nm, area%	99.0 %	99.44 %	**PASS**
Largest impurity	RP-HPLC, area%	1.0 %	0.18 % at 7.59 min (Gln 3 /Gln 19 deamidation)	**PASS**
Water content	Karl Fischer	5.0 %	1.6 %	**PASS**
Bacterial endotoxin	LAL, kinetic	≤ 5.0 EU/mg	0.04 EU/mg	**PASS**
Sterility / bioburden	USP <71>, membrane filtration	No growth after 14 days	No growth; conforms	**PASS**

1 HPLC CHROMATOGRAM

Data file: RET_PL-2609-085_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 · RET_PL-2609-085_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 / USHX19401

MOBILE PHASE A
0.1% TFA in water

MOBILE PHASE B
0.1% TFA in MeCN

FLOW RATE
1.0 mL/min

COLUMN TEMPERATURE
40 °C

INJECTION VOLUME
20 µL

RUN TIME
12 min

SAMPLE DILUENT
0.1% TFA in 30% MeCN

SAMPLE CONCENTRATION
0.5 mg/mL

BLANK INJECTED
Yes

REFERENCE STANDARD
In-house Retatrutide reference, lot PL-RS-RET-01, RT 8.74 min

3 GRADIENT PROGRAM

TIME (MIN)	% A	% B
0.0	65	35
2.0	65	35
9.0	25	75
10.0	15	85
11.0	15	85
12.0	65	35

4 PEAK TABLE

PEAK	RT (MIN)	AREA	AREA %
1	6.13	5,204	0.11
2 (deamid.)	7.59	8,516	0.18
3	8.31	6,151	0.13
4	**8.77**	**4,704,795**	**99.44**
5	9.13	6,624	0.14
Total		4,731,290	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)
947.3 (5+ [M+5H]) · 789.6 (6+ [M+6H])

DECONVOLUTED MASS
4731.3 Da

THEORETICAL MASS
4731.4 Da

DIFFERENCE
−0.1 Da (−21 ppm)

DATA FILE
RET_PL-2609-085_MS_20260919_01

ACCEPTANCE
Within ± 1.0 Da

6 ADDITIONAL TESTS

TEST	PERFORMED BY	DATE	REPORT / FILE
Water content	PrymaLab	2026-09-19	RPT-KF-PL-2609-085
Endotoxin	PrymaLab	2026-09-19	RPT-ET-PL-2609-085
Sterility	PrymaLab	2026-09-19	RPT-ST-PL-2609-085

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. This copy is issued for Alpha Tides, 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-26-00085 and key 4FNUZA3N 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.