Analytical Testing Laboratory
7271 Engle Rd Unit 201A, Middleburg Heights, OH 44130
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CERTIFICATE OF ANALYSIS

COA #: **SD20261109_025_RT10**

SAMPLE INFORMATION

Client	First Standard Peptides	**Accession #**	SD20261109_025
Compound	Retatrutide	**Date Received**	11/09/2026
Molecular Formula	C221H342N46O68	**Date Reported**	11/10/2026
Appearance	White lyophilized powder	**Labeled Quantity**	10mg
Sample Form	Lyophilized Vial	**Lot / Batch #**	RT10-26-B001
Storage	Room Temp	**CAS Number**	2381089-83-2
Cap Color	Purple		



All Chemical Analysis Performed by LC-MS/MS

ANALYTICAL RESULTS

Test / Analysis	Method	Specification	Result	Status
Identity (Mass Confirmation)	LC-MS/MS	Matches reference mass	Retatrutide	**Pass**
Purity	LC-MS/MS	≥ 95.0%	99.37%	**Pass**
Net Peptide Content	HPLC	Report value	10.71mg	**Pass**
Observed Molecular Mass	LC-MS	Within ± 1.0 Da	1184 [M+4}	**Pass**
Theoretical Molecular Mass	Reference	—	4731.35 Da	**Pass**
Related Substances / Impurities	LC-MS/MS	Report value	Not Detected	**Pass**
Residual Solvents	LC-MS/MS	Report value	Not Detected	N/A

John Humes, MS. **John Humes, MS.**
Analyzed by · Laboratory Analyst · 11/10/2026

Chetan Soni, PhD. **Chetan Soni, PhD.**
Approved by · Laboratory Director · 11/10/2026

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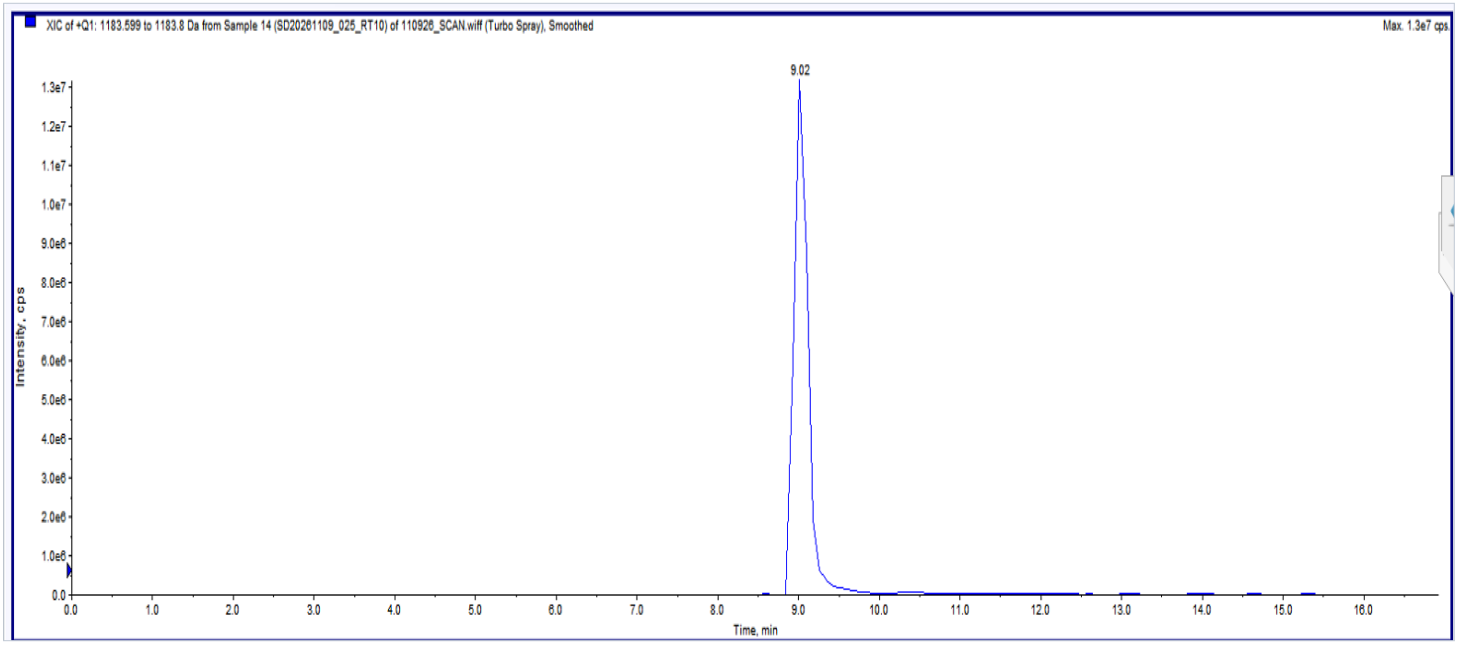
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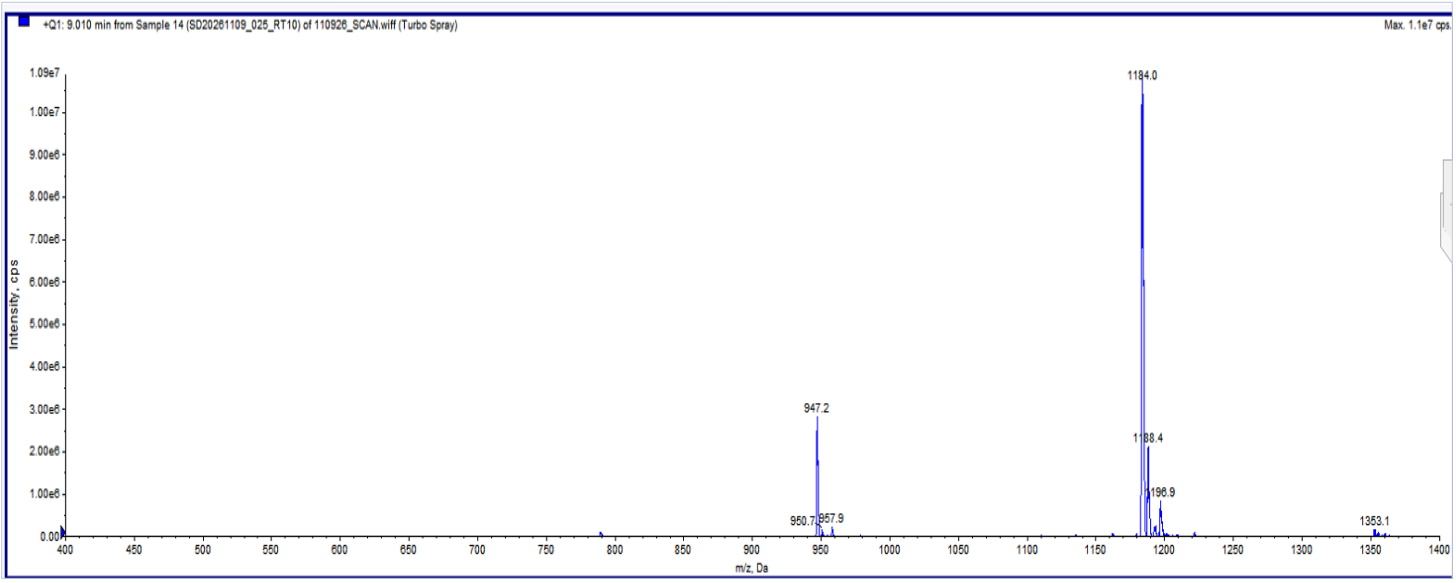
ANALYTICAL DATA

COA #: **SD20261109_025_RT10**

CHROMATOGRAM



MASS SPECTRUM (LC-MS)



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ANALYTICAL INTERPRETATION

Chromatogram

Retention Time Match for Retatrutide

Mass Spectrum (LC-MS)

Sample ID: SD20261109_025_RT10
Label Claim: Retatrutide

Observed Ions
m/z 947.2, assigned as [M+5H] Retatrutide
m/z 1184.0, assigned as $[M+4H]^4$ Retatrutide
m/z 1198.9, isotope/adduct associated with the 4+ charge state
m/z 1353.1, minor adduct/associated species
m/z 957.9, isotope/adduct associated with the 5+ charge state
Expected Mass

Retatrutide

Neutral mass ≈ 4731.3 Da

Expected charge states:

[M+5H] ≈ 947.3
$[M+4H]^4$ ≈ 1183.6
Deconvoluted Mass Calculations

m/z 947.2 ([M+5H])

(947.2×5)−5=4731.0 Da(947.2 \times 5)-5 = 4731.0 \text{ Da}(947.2×5)−5=4731.0 Da

m/z 1184.0 ($[M+4H]^4$)

(1184.0×4)−4=4732.0 Da(1184.0 \times 4)-4 = 4732.0 \text{ Da}(1184.0×4)−4=4732.0 Da
Interpretation

The spectrum contains the characteristic Retatrutide charge-state distribution:

m/z 947.2, assigned as [M+5H] Retatrutide, deconvoluting to 4731.0 Da
m/z 1184.0, assigned as $[M+4H]^4$ Retatrutide, deconvoluting to 4732.0 Da

Additional observed ions include:

m/z 1198.9, isotope/adduct associated with the 4+ charge state
m/z 1353.1, minor adduct/associated species
m/z 957.9, isotope/adduct associated with the 5+ charge state

The spectrum exhibits:

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Strong 5+ and 4+ precursor ions
Excellent agreement between independent deconvoluted masses
Clean baseline with minimal interference
Expected Retatrutide charge-state distribution
No significant ions indicative of an alternate peptide identity
Conclusion

The observed precursor ions at m/z 947.2 and 1184.0 form the expected Retatrutide charge-state distribution and deconvolute to approximately 4731-4732 Da, consistent with the theoretical molecular mass of Retatrutide.

Result: PASS – Identity Consistent with Retatrutide.

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