Analytical Testing Laboratory
7271 Engle Rd Unit 201A, Middleburg Heights, OH 44130
www.sonic-laboratories.com
COA inquiries: info@sonic-laboratories.com
Verify at sonic-laboratories.com/coa-lookup **Code: QQ75M6QZ**

CERTIFICATE OF ANALYSIS

COA #: **SD20261109_035_TB10**

SAMPLE INFORMATION

Client	First Standard Peptides	**Accession #**	SD20261109_035
Compound	TB-500 (Thymosin Beta-4)	**Date Received**	11/09/2026
Molecular Formula	C212H350N56O78S	**Date Reported**	11/11/2026
Appearance	White lyophilized powder	**Labeled Quantity**	10mg
Sample Form	Lyophilized Vial	**Lot / Batch #**	BT10-26-B001
Storage	Room Temp	**CAS Number**	77591-33-4
Cap Color	Green		



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	TB-500	**Pass**
Purity	LC-MS/MS	≥ 95.0%	98.52%	**Pass**
Net Peptide Content	HPLC	Report value	10.075 mg	**Pass**
Observed Molecular Mass	LC-MS	Within ± 1.0 Da	889 [M+4H]	**Pass**
Theoretical Molecular Mass	Reference	—	3559 Da	**Pass**
Related Substances / Impurities	LC-MS/MS	Report value	Not Detected	**Pass**
Residual Solvents	LC-MS/MS	Report value	Not Detected	**Pass**

John Humes, MS.

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

Chetan Soni, PhD.

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

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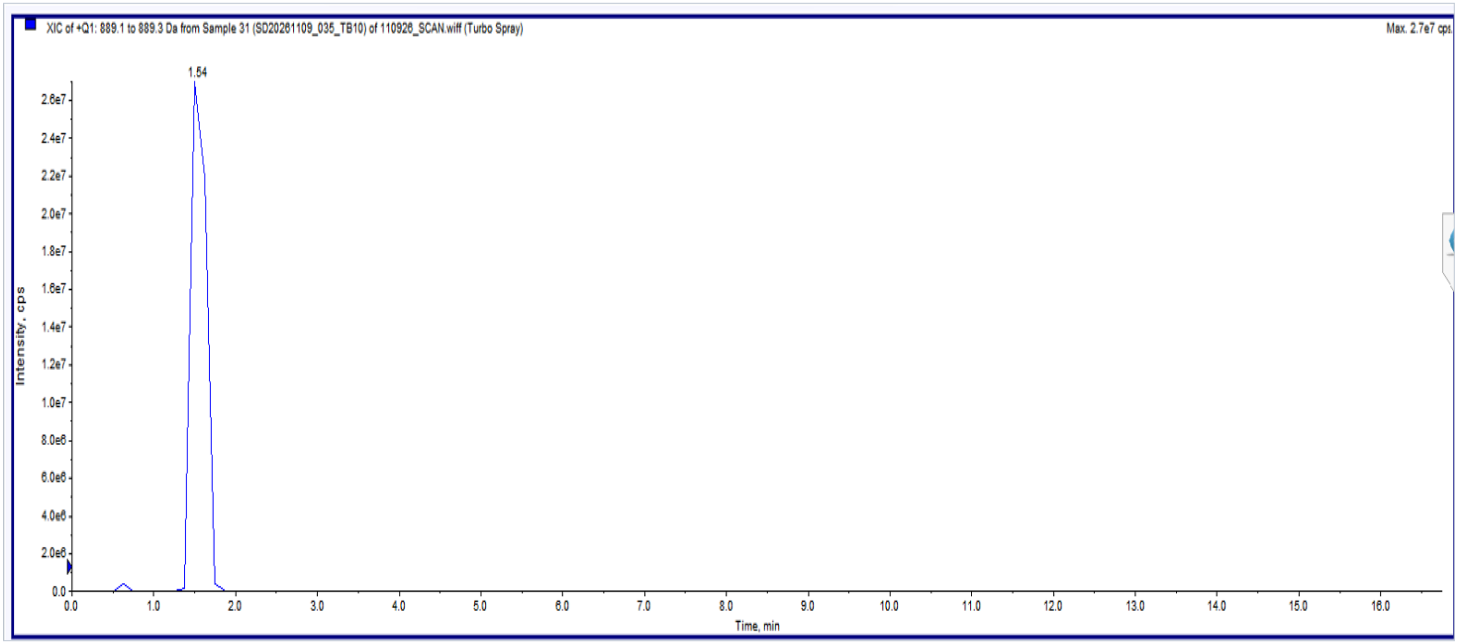
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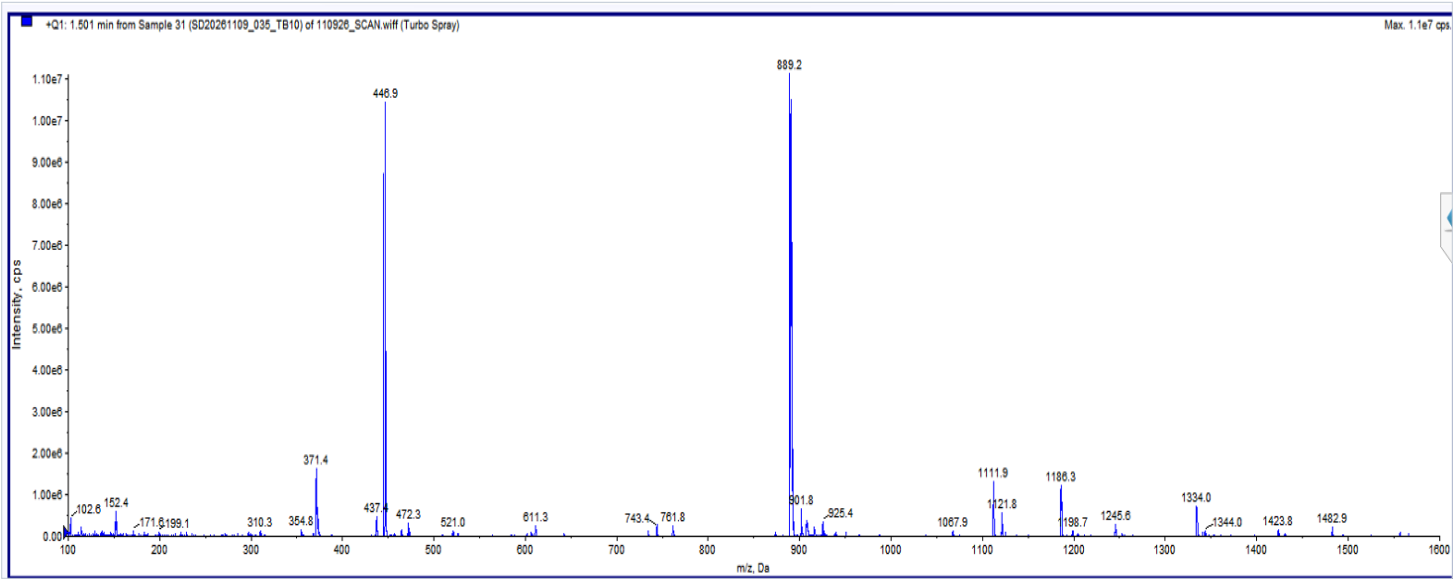
ANALYTICAL DATA

COA #: **SD20261109_035_TB10**

CHROMATOGRAM



MASS SPECTRUM (LC-MS)



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ANALYTICAL INTERPRETATION

Chromatogram

Retention Time Match for TB500

Mass Spectrum (LC-MS)

Sample ID: SD20261109_035_TB10
Label Claim: TB500

Observed Ions
m/z 446.9, assigned as [M+8H] TB500
m/z 889.2, assigned as $[M+4H]^4$ TB500
m/z 1186.3, assigned as $[M+3H]^3$ TB500
m/z 1111.9, associated ion
m/z 1334.0, associated ion
m/z 1423.8, associated ion
Deconvoluted Mass Calculations
m/z 446.9 ([M+8H])
m/z 889.2 ($[M+4H]^4$)
m/z 1186.3 ($[M+3H]^3$)

Interpretation

The spectrum contains a coherent multiply charged ion series:

m/z 446.9, assigned as [M+8H]
m/z 889.2, assigned as $[M+4H]^4$
m/z 1186.3, assigned as $[M+3H]^3$

Additional observed ions include:

m/z 1111.9, associated ion
m/z 1334.0, associated ion
m/z 1423.8, associated ion

The spectrum exhibits:

Strong multiply charged precursor ions
Consistent deconvoluted molecular mass
Clean baseline with minimal interference
No evidence of an alternate peptide identity
Conclusion

The observed precursor ions form a coherent charge-state distribution that deconvolutes to approximately 3559 Da, consistent with the expected mass spectral profile of the labeled TB500 material.

Result: PASS – Identity Consistent with TB500.

John Humes, MS. **John Humes, MS.**
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Note: This spectrum is distinctly different from the full-length TB4 spectra (which deconvoluted to ~4963 Da) and should be reported as TB500, not Thymosin β4.

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