Gold Standard Analytics

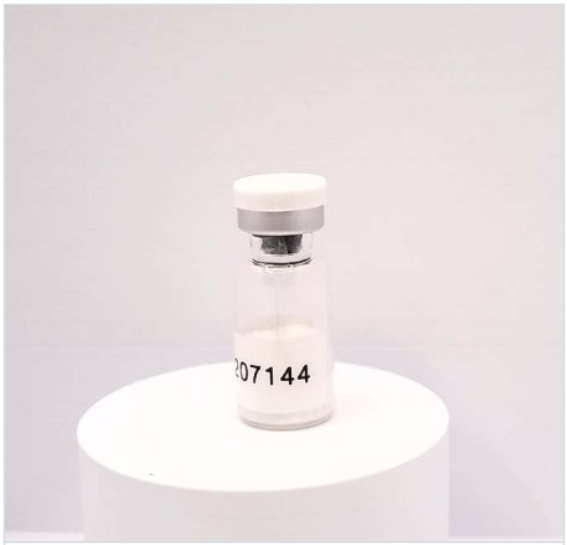
Gold Standard Analytics LLC, Houston, TX

CERTIFICATE OF ANALYSIS

Report GSA-COA-000113-11301-20261125 · issued Nov 27, 2026

Mike Nguyen

PRODUCT	ORDER	SAMPLE
Retatrutide	GSA-2026-000113	113-01
LOT	**ISSUED**	
207144	Nov 27, 2026	



THE SAMPLE AS RECEIVED

IDENTITY ✓

Retatrutide

confirmed by mass

PURITY ✓

99.53 %

HPLC-UV, 214 nm

IMPURITY ANALYSIS ✓

None above 0.47 %

no peak other than retatrutide above the reporting limit

NET CONTENT

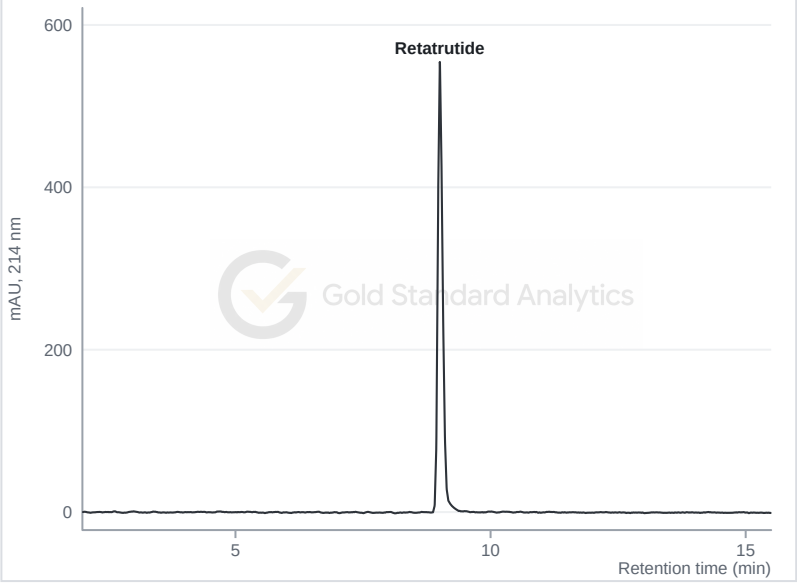
19.3 mg

per vial; 96 % of the declared 20 mg

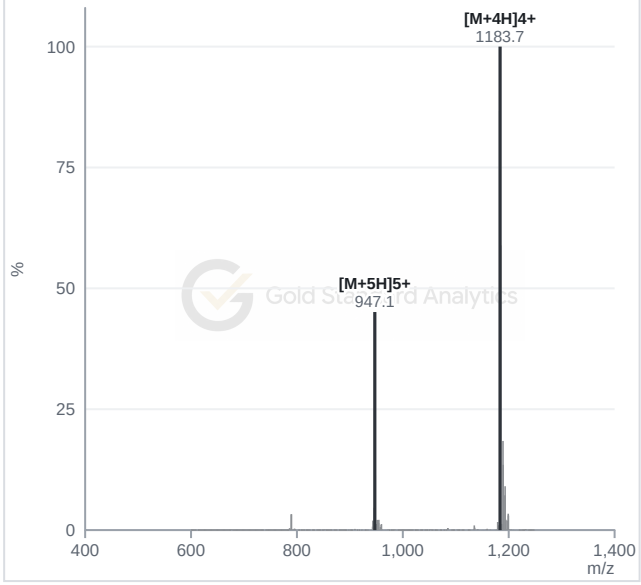
✓ **Residual solvents** — **None detected**
28 solvents by USP <467>, all within ICH Q3C limits

✓ **Endotoxins** Limit 0.5 EU/mL; spike recovery 63 % — **< 0.2 EU/mL**

HPLC CHROMATOGRAM UV, 214 nm



MASS SPECTRUM at the retatrutide peak (9.00 min)



RELEASED BY

Ian Ebert
Laboratory Director · Nov 27, 2026

Scan to verify
goldstandardanalytics.com/coa/

Results are not covered by ISO/IEC 17025 accreditation. Results relate only to the sample as received and tested.

The sample

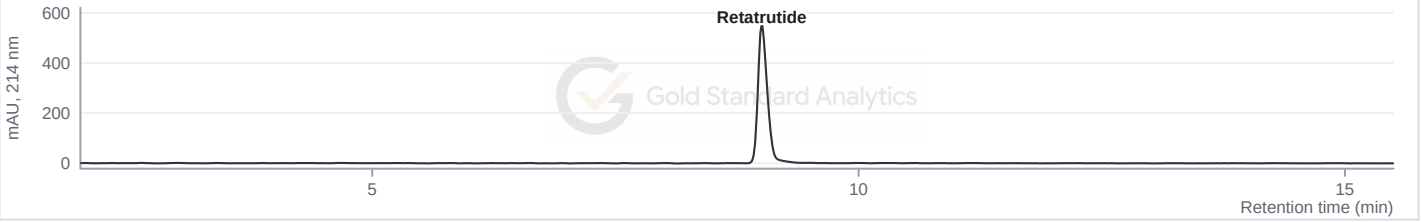
Order GSA-2026-000113 · Sample 113-01 · Mike Nguyen

Customer	**Mike Nguyen**	Lot	**207144**
Order	**GSA-2026-000113**	Prepared	**24 Nov 2026**
Sample	**113-01**	Tested	**25 Nov 2026**
Label	**No manufacturer label (clear vial, white cap, marked 207144); declared retatrutide 20 mg**	Tests	**Identity, Purity, Impurity breakdown, Net content, Residual solvents, Endotoxins**

Graphs

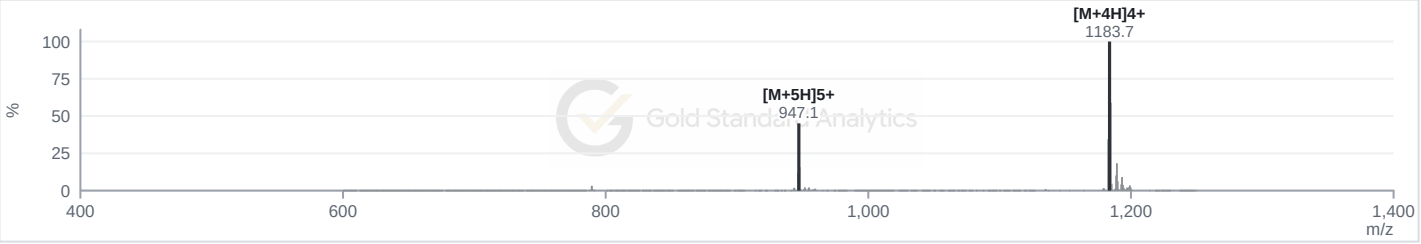
HPLC CHROMATOGRAM

HPLC chromatogram (UV, 214 nm) · mAU, 214 nm against Retention time (min)



MASS SPECTRUM

Mass spectrum at the retatrutide peak (9.00 min) · Counts against m/z



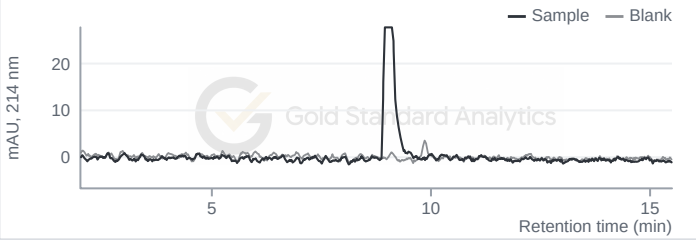
Results

Identity	**Consistent with retatrutide.** The main peak at 9.00 min carries retatrutide's 4+ and 5+ ions (m/z 1183.7 and 947.1; molecular mass 4,730.6, expected 4,731.3).
Purity	**99.53 %** by HPLC with UV detection at 214 nm. No peak other than retatrutide was found, down to about 0.47 % of the retatrutide peak height, so purity is reported as 99.53 % rather than as 100 %.
Net content	**19.3 mg per vial** (96 % of the declared 20 mg).
Residual solvents	**None of 28 solvents detected.** By USP <467>. Each solvent's reporting limit is at or below its ICH Q3C(R9) limit, so each is within that limit. See the Residual solvents table.
Endotoxins	**< 0.2 EU/mL, within the 0.5 EU/mL limit.** Bacterial endotoxins by the LAL test. The spiked sample recovered 63 % of the endotoxin added, inside the 50 to 200 % range that shows the sample does not interfere with the test.

Zoomed views

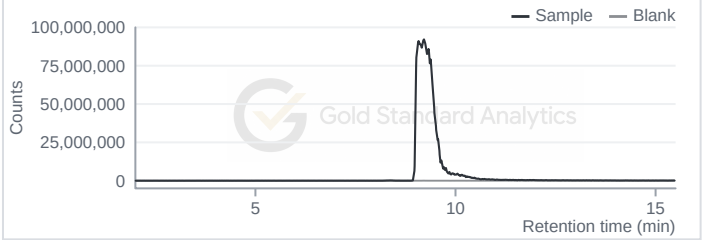
HPLC, SMALL PEAKS

Zoomed in on the small peaks (5 % of the main peak) · mAU, 214 nm against Retention time (min)



ION TRACE

Ion trace, m/z 1183.8 (retatrutide 4+): sample vs blank · Counts against Retention time (min)



Impurities

Every UV peak above the reporting limit was retatrutide.

Amounts are each peak's share of the total UV peak area at 214 nm.

Residual solvents

Each solvent by USP <467>, 25 Nov 2026, against its ICH Q3C(R9) concentration limit:

SOLVENT	CAS	RESULT	REPORTING LIMIT (MG/KG)	ICH Q3C LIMIT (MG/KG)
Acetone	67-64-1	ND	200	5,000
Acetonitrile	75-05-8	ND	80	410
Benzene	71-43-2	ND	0.2	2
2-Butanone	78-93-3	ND	5	5,000
Carbon tetrachloride	56-23-5	ND	0.5	4
Chlorobenzene	108-90-7	ND	10	360
Chloroform	67-66-3	ND	10	60
Cyclohexane	110-82-7	ND	120	3,880
1,2-Dichloroethane	107-06-2	ND	1	5
1,1-Dichloroethene	75-35-4	ND	1	8
1,2-Dichloroethenes	540-59-0	ND	130	1,870
Dichloromethane	75-09-2	ND	180	600
1,2-Dimethoxyethane	110-71-4	ND	20	100
Dimethyl sulfoxide	67-68-5	ND	200	5,000
1,4-Dioxane	123-91-1	ND	30	380
Ethanol	64-17-5	ND	200	5,000
Ethyl acetate	141-78-6	ND	200	5,000
Ethylbenzene	100-41-4	ND	200	with xylenes
Hexanes	110-54-3	ND	50	290
Methanol	67-56-1	ND	90	3,000
2-Methoxyethanol	109-86-4	ND	10	50
Methyl acetate	79-20-9	ND	140	5,000
Methyl t-butyl ether	1634-04-4	ND	200	5,000
Tetrahydrofuran	109-99-9	ND	100	720
Toluene	108-88-3	ND	50	890
1,1,1-Trichloroethane	71-55-6	ND	100	1,500
Trichloroethene	79-01-6	ND	10	80
Xylenes, total	1330-20-7	ND	100	2,170

ND: not detected at or above the reporting limit. Limits are ICH Q3C(R9) concentration limits (Option 1); ethylbenzene is limited with the xylenes.

How it was tested

Liquid chromatography with UV and mass-spectrometry detection: Agilent 1290 Infinity II LC with a 6490 triple-quadrupole mass spectrometer. Column Polaris C18-A, 2.0 x 150 mm, 55 °C; water and acetonitrile, each with 0.1 % formic acid. Identity: molecular mass from the multiply charged ions in the mass spectrum. Purity: UV peak area at 214 nm, after subtracting a blank run in the same sequence. 1.2 µL injected; autosampler at 12 °C. Net content: UV absorbance at 280 nm of the retatrutide peak, using the absorptivity calculated from its amino-acid sequence, scaled by the volumes used: the whole vial dissolved in 2.0 mL, and 0.10 mL of that diluted to 1.0 mL; its uncertainty is roughly ±16 %.

Residual solvents: USP <467>, 28 solvents, each reported against its reporting limit and its ICH Q3C(R9) concentration limit.

Endotoxins: bacterial endotoxins test with Limulus amebocyte lysate (LAL), with a spiked sample (positive product control) to check recovery.

Notes

Results apply only to the sample as received and tested.

Release

This report is signed electronically at release. The signature is printed on page 1, and the release record, added as the last page, gives the date and the verification code.

Customer and order	Mike Nguyen · GSA-2026-000113
Sample and report	113-01 · Retatrutide Certificate of Analysis
Report reference	GSA-COA-000113-11301-20261125-RS1
Certificate accession	GSA-2026-619820
Released and signed by	Ian Ebert, Laboratory Director
Date and time (UTC)	2026-11-27 23:32:33Z
Signature meaning	Approved for release. The signer reviewed this report and approved its release to its customer.
Approval reference	f2cd0d5d-2fd5-4142-a220-288a2ae43370
Electronic signature	Signed electronically in a signed-in GSA staff account.
Original report SHA-256	e3e851675e118628194400923e75f5c9c406ad9d38d255e59c865e6d993ef91f
Verify this certificate	https://goldstandardanalytics.com/coa/GSA-2026-619820

Scan to view this certificate online

Signature



Ian Ebert, Laboratory Director