



Sample and batch information 样品与批次信息

Product name 产品名称	Retatrutide 瑞他鲁肽	Batch No. 批次号	RETA-20260801-60A
Alias / code 别名 / 代号	LY3437943	Strength 规格	60 mg/vial, lyophilized 60 mg/瓶 冻干粉
CAS No. CAS 号	2381089-83-2	Manufacture date 生产日期	01 Aug 2026 2026-08-01
Material No. 内部物料号	FX-SP-RETA-60	Testing date 检测日期	05-08 Aug 2026 2026-08-05 ~ 08
Molecular formula 分子式	C221H342N46O68	Issue date 签发日期	12 Aug 2026 2026-08-12
Theoretical MW 理论分子量	4731.33 Da 平均分子量	Retest date 复检期	01 Feb 2027 2027-02-01

Appearance 外观	White to off-white lyophilized powder 白色至类白色冻干粉
Storage 储存条件	Store at -20 °C, protected from light and moisture -20 °C, 避光、干燥
Client 委托方	Henan Fengxin Cultural Communication Co., Ltd. 河南峰鑫文化传播有限公司
Testing laboratory 检测机构	Nexus Analytical Laboratory (third party) 奈克斯分析实验室 (第三方)
Sample received 收样日期	03 Aug 2026 2026-08-03
Sample ID 样品编号	SP-SMPL-260812-0017

Amino acid sequence 氨基酸序列

H-Tyr-Aib-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Ile-Aib-Leu-Asp-Lys-Lys(AEEA-AEEA-y-Glu-C20 diacid)-Ala-Gln-Aib-Aib-Phe-Ile-Glu-Tyr-Leu-Leu-Glu-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH2
Aib = 2-aminoisobutyric acid; AEEA = 8-amino-3,6-dioxaoctanoic acid; C20 diacid = eicosanedioic acid; Lys17 lipidated; C-terminal amide.

Test results 检测结果

Test item 检测项目	Method 方法	Specification 标准 / 限度	Result 结果	Judgment 判定
Appearance 外观	Visual 目视	White to off-white lyo. powder 白色至类白色冻干粉	White lyophilized powder 白色冻干粉	Conforms 合格
Identification 鉴别	ESI-MS 电喷雾质谱	Observed MW consistent 实测分子量与理论值一致	4731.21 Da 与理论值相符	Conforms 合格
Purity 纯度	RP-HPLC, 214 nm 面积归一化	>= 99.0% 不低于 99.0%	99.64% 主峰 13.276 min	Conforms 合格
Molecular weight 分子量	Deconvoluted ESI-MS ESI-MS 去卷积	4731.33 ± 1.0 Da 平均分子量	4731.21 Da 偏差 -0.12 Da	Conforms 合格
Peptide content 肽含量	Nitrogen / calculation 氮测定 / 计算	>= 95.0% as-is 不低于 95.0% (原样)	96.8% 原样计	Conforms 合格
Water 水分	Karl Fischer 卡尔费休	<= 5.0% 不高于 5.0%	2.87%	Conforms 合格
Residual TFA 残留 TFA	HPLC / IC 液相 / 离子色谱	<= 1.0% 不高于 1.0%	0.38%	Conforms 合格
Counter ion 反离子	Ion chromatography 离子色谱	Report 报告	TFA salt 三氟乙酸盐	Conforms 合格
Solubility 溶解性	Visual 目视	Clear in water / 0.1% TFA 水溶液澄清	Clear, colorless 澄清无色	Conforms 合格
Bacterial endotoxin 细菌内毒素	Gel-clot LAL 凝胶法	<= 5 EU/mg 不高于 5 EU/mg	< 2.0 EU/mg	Conforms 合格



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Residual solvents 残留溶剂 (ICH Q3C / USP <467>, GC-MS)

Solvent 溶剂	Class 类别	Limit 限度	Result 结果	Judgment 判定
Acetonitrile 乙腈	Class 2 2 类	410 ppm	36 ppm	Conforms 合格
Methanol 甲醇	Class 2 2 类	3000 ppm	82 ppm	Conforms 合格
Dichloromethane 二氯甲烷	Class 2 2 类	600 ppm	Not detected 未检出	Conforms 合格
DMF N,N-二甲基甲酰胺	Class 2 2 类	880 ppm	Not detected 未检出	Conforms 合格
Diethyl ether 乙醚	Class 3 3 类	5000 ppm	41 ppm	Conforms 合格

Heavy metals 重金属 (ICP-MS, USP <233>)

Element 元素	Limit 限度	Result 结果	Judgment 判定
Lead (Pb) 铅	<= 0.50 ppm	< 0.10 ppm	Conforms 合格
Arsenic (As) 砷	<= 0.50 ppm	< 0.10 ppm	Conforms 合格
Cadmium (Cd) 镉	<= 0.20 ppm	< 0.05 ppm	Conforms 合格
Mercury (Hg) 汞	<= 0.10 ppm	< 0.05 ppm	Conforms 合格
Total heavy metals 重金属总量	<= 10 ppm	< 1.0 ppm	Conforms 合格

Amino acid analysis 氨基酸分析

Method: acid hydrolysis followed by UHPLC pre-column derivatization. Consistent with sequence.

方法: 酸水解后 UHPLC 柱前衍生。结果与理论序列相符。

Asx, Glx, Ser, Gly, Thr, Ala, Pro, Tyr, Phe, Lys, Leu and Ile ratios are consistent (typically within $\pm 20\%$). Aib and lipidated Lys17 confirmed by MS.

Overall conclusion 综合结论

CONFORMS

合格

The batch conforms to the listed specifications and is released for laboratory research use.

本批次按上列项目检测, 结果符合规定, 准予放行用于实验室研究用途。

Authorization 审核签章

Analyst

检测人

08 Aug 2026

Reviewer

复核人

10 Aug 2026

Approver

批准人

CA5801E69417
N/S b10628

12 Aug 2026



Annex A HPLC chromatogram 附件 A 高效液相色谱图

Related COA COA-RETA-20260812-001 Batch RETA-20260801-60A Sample SP-SMPL-260812-0017

本附件与同一份分析证书对应，不可单独使用。

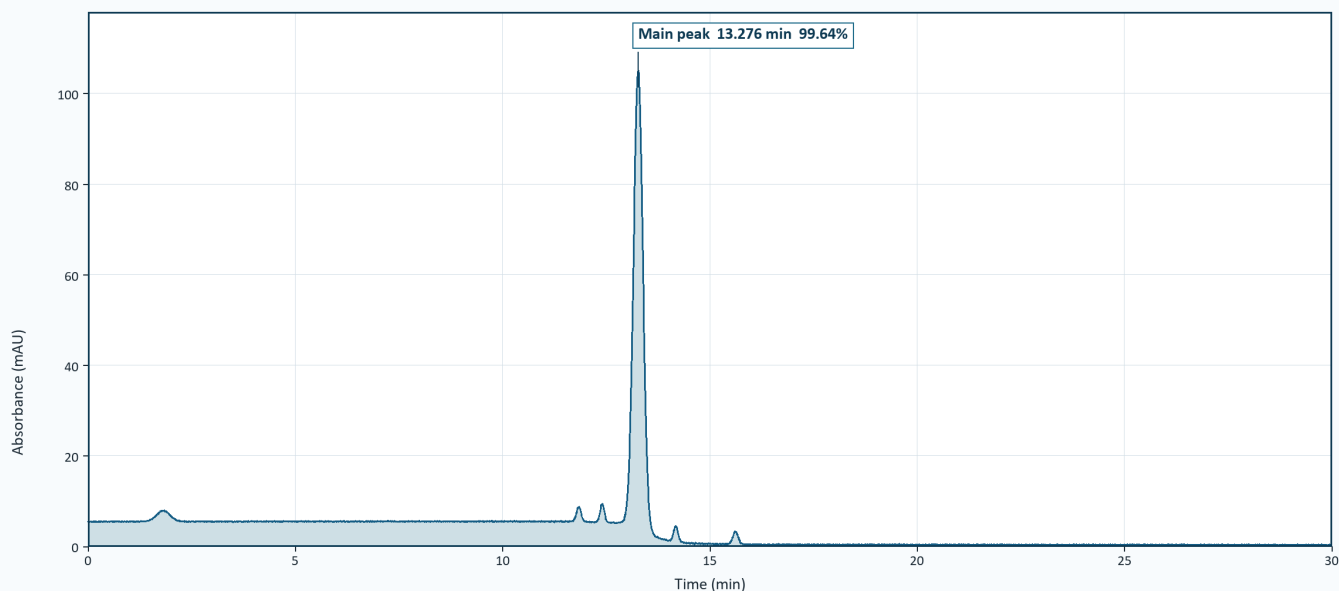
Chromatographic conditions

色谱条件

Instrument	RP-HPLC, UV detector, 214 nm	Column	C18, 4.6 x 250 mm, 5 um
Mobile phase	A: 0.1% TFA/H ₂ O B: 0.1% TFA/ACN	Gradient	25-65% B in 20 min, then 90% B wash
Flow / temp.	1.0 mL/min, 40 °C	Injection	10 uL, 1.0 mg/mL in 0.1% TFA
Method	SP-QC-HPLC-039	Main peak	13.276 min, 99.64%

HPLC Chromatogram | RP-HPLC / UV 214 nm

Sample RETA-20260801-60A Data file RETA_260805_001 Method SP-QC-HPLC-039



Peak	RT (min)	Area	Area %	Height	Name
1	11.842	18452	0.12	1.8	Imp-1
2	12.407	13839	0.09	2.4	Imp-2
3	13.276	15322641	99.64	100.0	Retatrutide
4	14.183	12302	0.08	2.0	Imp-3
5	15.621	10764	0.07	1.6	Imp-4



Annex B Mass spectra 附件 B 质谱图

Related COA COA-RETA-20260812-001 Batch RETA-20260801-60A Sample SP-SMPL-260812-0017

本附件与同一份分析证书对应，不可单独使用。

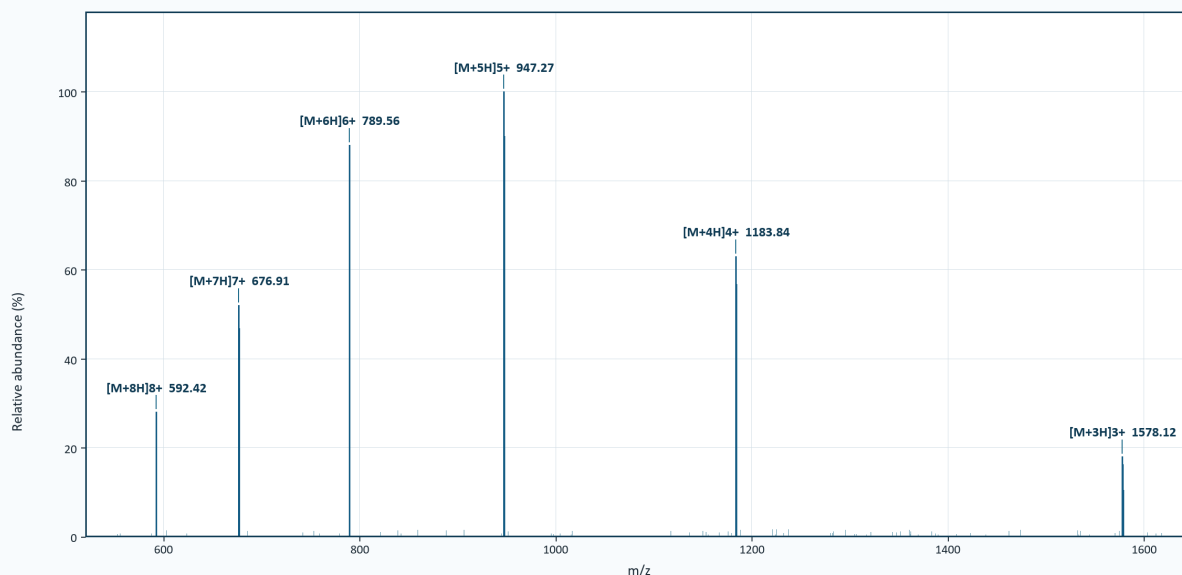
MS conditions

质谱条件

Ionization	ESI+, multiply charged	Range	m/z 500-1700
Deconvolution	Zero-charge / MaxEnt	Theoretical	4731.33 Da (average)
Observed	4731.21 Da	Delta	-0.12 Da / -25 ppm
Method	SP-QC-MS-039	Data file	RETA_260806_MS01

ESI-MS Spectrum | Positive mode, multiply charged ions

Sample RETA-20260801-60A Theoretical average mass 4731.33 Da Method SP-QC-MS-039



Deconvoluted Molecular Weight | MaxEnt / zero-charge

Observed 4731.21 Da Theoretical 4731.33 Da Delta -0.12 Da -25 ppm

