

CERTIFICATE OF ANALYSIS

Summary Report — Analytical Verification

PRODUCT NAME:	Retatrutide	BATCH NUMBER:	P250102-R01001
CAS NUMBER:	2381089-83-2	TESTING TYPE:	Full In-House Analytical Verification

1. IDENTITY VERIFICATION

TEST PARAMETER	SPECIFICATION / REFERENCE	RESULT
Appearance	White powder “白色粉末 White powder”	Conforms
Solubility	Freely soluble in water “易溶于水 Freely soluble in water”	Conforms
Solution Clarity & Color	Clear and colorless “无色澄清 Clear and colorless”	Conforms
Infrared Spectrum (IR)	IR absorption spectrum matches reference “红外光吸收谱图应与对照的图谱一致”	Conforms
HPLC Identification	Main peak retention time matches reference standard “主峰的保留时间与对照品一致”	Conforms
Molecular Ion Mass	4731.42 ± 1.0 Da “4731.42±1.0Da”	Conforms
Amino Acid Ratio	Matches theoretical composition “氨基酸比值... Conforms”	Conforms

2. PURITY & IMPURITY PROFILE

TEST PARAMETER	SPECIFICATION	RESULT
HPLC Purity	≥ 99.0%	99.33%
Single Impurity	≤ 1.0%	0.44%
High Molecular Weight Species	≤ 0.5%	0.08%

Note: These values confirm a clean synthesis with minimal impurities and low polymerization.

3. PHYSICOCHEMICAL PROPERTIES

PARAMETER	SPECIFICATION	RESULT
pH	6.0 – 9.0	6.6
Water Content (KF)	≤ 10%	1.3%
Sodium Ion	≤ 5%	1.7%

Note: All values fall well within acceptable ranges.

4. RESIDUAL SOLVENTS (GC)

SOLVENT	SPECIFICATION	RESULT
Acetonitrile	≤ 410 ppm	< LOQ
Methanol	≤ 3000 ppm	ND (Not Detected)
MTBE	≤ 5000 ppm	ND (Not Detected)
Dichloromethane	≤ 600 ppm	ND (Not Detected)
DMF	≤ 880 ppm	ND (Not Detected)

Note: All solvents are below detection limits — excellent solvent cleanliness.

5. MICROBIOLOGICAL & ENDOTOXIN TESTING

TEST PARAMETER	SPECIFICATION	RESULT
Bacterial Endotoxins	≤ 5 EU/mg	Conforms
TAMC (Total Aerobic Microbial Count)	≤ 200 cfu/g	25 cfu/g
TYMC (Total Combined Yeasts/Molds Count)	≤ 100 cfu/g	10 cfu/g
E. coli	Absent	Absent

Note: These results confirm proper sterile handling and microbiological safety.

6. ACID GROUP IONS

ION PARAMETER	SPECIFICATION	RESULT
Trifluoroacetate (TFA)	≤ 0.1%	ND (Not Detected)
Acetate	≤ 0.1%	ND (Not Detected)

Note: Both acid ions were not detected — a strong indicator of clean purification.

7. PEPTIDE CONTENT

TEST PARAMETER	SPECIFICATION	RESULT
Peptide Content	≥ 85%	96.5%

Note: This exceeds the minimum requirement and confirms high peptide integrity.

8. STORAGE CONDITIONS

Store in airtight containers, protected from light, at **−20°C ± 5°C**.

9. Final Conclusion

Overall Result: Conforms to Specification
This batch meets all internal analytical standards and demonstrates excellent purity, identity, and safety.

This Certificate of Analysis is provided for informational and research purposes only.
All supplier-identifying information has been removed for privacy.