


**CERTIFICATE OF ANALYSIS**

Product Name	Retatrutide / LY3437943 (Cat.# 319206, >99% purity)
Lot No.	MTFA31062-0301
Sequence	Tyr-{Aib}-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Ile- $\{\alpha$ -Me-Leu}-Leu-Asp-Lys-{diacid-C20-gamma-Glu-(AEEA)-Lys}-Ala-Gln-{Aib}-Ala-Phe-Ile-Glu-Tyr-Leu-Leu-Glu-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH <sub>2</sub> (Sodium salt)
Dissolution condition	100% H <sub>2</sub> O
Length	39AA
Modification	sodium salt
Molecular Weight (MW)	4731.33
Storage	-20°C

	Specifications	Results
<b>Appearance</b>	White to off-white lyophilized powder	Conforms
<b>MW by MS</b>	4731.30±2Da	4731.60Da
<b>Dissolution</b>	Tested: Water Acetonitrile DMSO	Water: soluble, 197.5mg/ml Acetonitrile: insoluble DMSO: soluble, 105.0mg/ml
<b>pH value</b>	6.0-8.0	7.5
<b>TFA</b>	≤0.5%	0%, undetectable
Acetate	≤5.0%	0%, undetectable
<b>Sodium salt</b>	≤5.0%	1.2%
<b>Purity</b>	≥98.0%	99.324%
<b>Impurity</b>	Single Impurity ≤1.0%	0.7%
	Total Impurity ≤2.0%	0.7%
<b>Polymer</b>	≤5.0%	0%, undetectable
<b>Net peptide content (NPC)</b>	≥80.0%	90.7%
<b>Water</b>	≤10.0%	3.0%

Certified by:



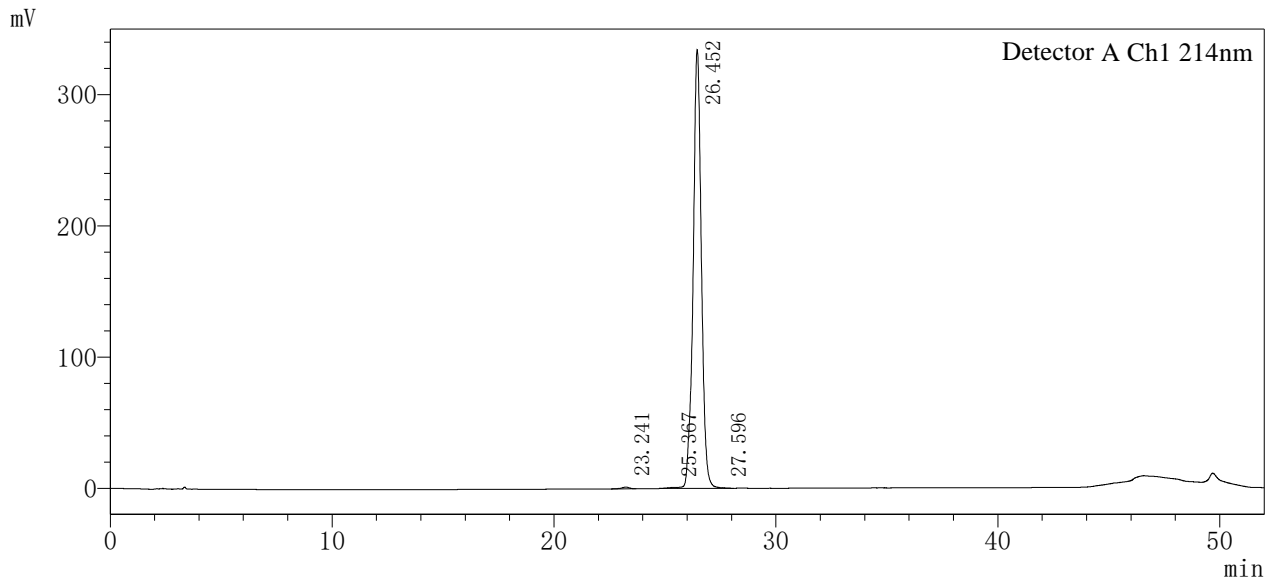
Quality Assurance Department

Mar/10/2024



**Sample Information**

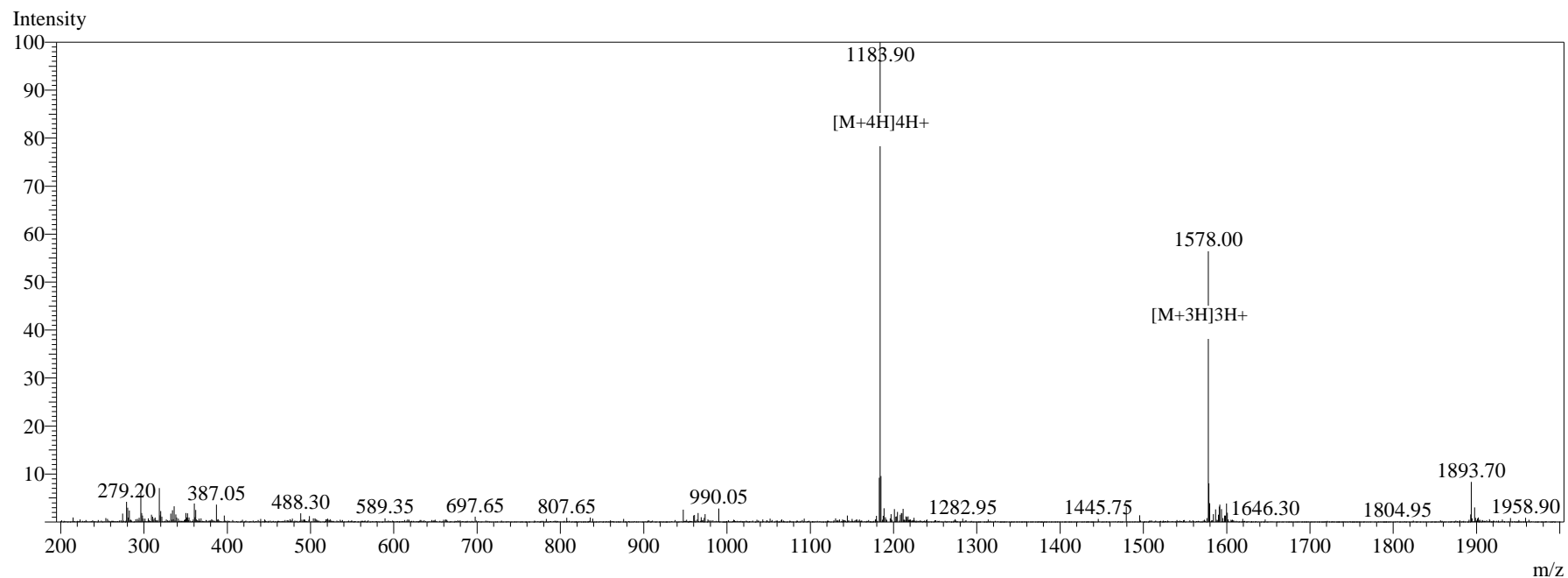
Order ID :Cat.# 319206  
 Name :Retatrutide  
 Sequence :Tyr- {Aib}-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Ile- { $\alpha$ -Me-Leu}-Leu-Asp-Lys- {diacid-C20-gamma-Glu-(AEEA)-Lys}-Ala-Gln- {Aib}-Ala-Phe-Ile-Glu-Tyr-Leu-Leu-Glu-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH<sub>2</sub>  
 Lot. No :MTFA31062  
 Pump A :0.1% Trifluoroacetic in 100% water  
 Pump B :0.1% Trifluoroacetic in 100% acetonitrile  
 Total Flow :1ml/min  
 Wavelength :214nm  
 Analytical column type :Phenomenex Luna® 5  $\mu$ m C18 (2) (4.6\*250mm\*5  $\mu$ m)  
 Dissolution method :50%ACN+50%H<sub>2</sub>O  
 Inj. Volume : 20ul  
 Time Module Action Value  
 0.01 Pumps B.Conc 45  
 20.00 Pumps B.Conc 65  
 33.00 Pumps B.Conc 100  
 38.00 Pumps B.Conc 100  
 40.00 Pumps B.Conc 45  
 50.00 Controller Stop

**Chromatogram**

**Peak Table**

Detector A Ch1 214nm

Peak#	Ret. Time	Area	Height	Area%	Separation (USP)	Tailing	Theoretical Plate (USP)
1	23.241	30469	1307	0.350	25513	0.8	--
2	25.367	23143	825	0.266	31	--	0.2
3	26.452	8651210	334654	99.324	27007	1.0	0.1
4	27.596	5278	369	0.061	--	--	--
总计		8710101	337155	100.000			

## MS Spectrum



## Sample Information

Dissolution method	:15% ACN+85% H <sub>2</sub> O	Interface	:ESI	Prerod Bias	:+4.5kv
Date Acquired	:2024/03/09 16:17:27	Nebulizing Gas Flow	:1.50L/min	Detector	:-0.2kv
Injection Volume	:0.2ul	CDL Temp	:250°C	T.Flow	:0.2ml/min
Block Temp	:200	CDL Volt	:0v	B.conc	:50% H <sub>2</sub> O/50% MEOH
Order ID	:MTFA31062				
Name	:Retatrutide				
Sequence	:Tyr-{ Aib }-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Ile-{ α-Me-Leu }-Leu-Asp-Lys-{ diacid-C20-gamma-Glu-(AEEA)-Lys }-Ala-Gln-{ Aib }-Ala-Phe-Ile-Glu-Tyr-Leu-Leu-Glu-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH <sub>2</sub>				
Lot.No	:MTFA31062-0301				
Theoretical	:4731.33				
Observed	:4731.60				

## Instructions for dissolving Retatrutide (LY3437943)

The Retatrutide is soluble in 100% H<sub>2</sub>O or 1xPBS. The maximum concentration is 5.0 mg/ml.

The steps are as below:

1. Adding 1.0 ml ultrapure water to the 2.0 ml tube of Retatrutide;
2. Wait about 1 minute at room temperature until the solution is clear, which indicates the peptide is fully dissolved;
3. Use a sterile 0.22  $\mu$ m membrane filter for a particle-free and bacteria-free Retatrutide solution.

For example, Catalog# SLGPR33RB, Millipore Millex-GP Syringe Filter Unit, 0.22  $\mu$ m, polyethersulfone, 33 mm, gamma sterilized.

The detailed application information of Retatrutide can be found at:

<https://pubmed.ncbi.nlm.nih.gov/37366315/>