



CERTIFICATE OF ANALYSIS

20 Martin Ross Avenue, North York, ON, M3J 2K8, CANADA
Tel: (416) 665-9696, Fax: (416) 665-4439
Email: orders.trc@lgcgroup.com Website: www.trc-canada.com

1. Identification

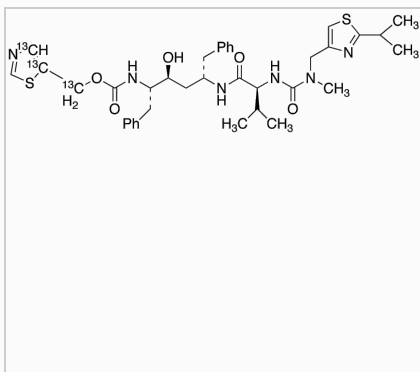
Catalogue Number: R535003

CAS Number: 1217673-23-8

Product: Ritonavir-13C3

Synonym: (3S,4S,6S,9S)-4-Hydroxy-12-methyl-9-(1-methylethyl)-13-[2-(1-methylethyl)-4-thiazolyl]-8,11-dioxo-3,6-bis(phenylmethyl)-2,7,10,12-tetraazatridecanoic Acid 5-Thiazolymethyl-13C3 Ester; A 84538-13C3; ABT 538-13C3; Norvir-13C3;

Structure:



Molecular Formula:

$C_{34}^{13}C_3H_{48}N_6O_5S_2$

Molecular weight:

723.92

Source of Product:

Synthetic

Solubility:

Chloroform (Slightly),
Methanol (Slightly)

Lot Number: 18-CF-96-1

Purity: 95%

Shipping Condition: This Product Is Stable To Be Shipped At Room Temperature

Storage Condition: -20°C

2. Warning

Warning 1: Not Determined

Warning 2:

Warning 3:

3. Analytical Information

Tests:	Specifications:	Results:
Appearance	White to Off-White Solid	Off-White Solid
NMR	Conforms to Structure	Conforms
MS	Conforms to Structure	Conforms
Isotopic Purity	>95%	99.3%
C NMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 60.09, %H: 6.18, %N: 11.35
HPLC Purity	Report Result	94.20% (205 nm)

Additional Information:

Elemental Analysis: (Theoretical) %C: 61.38, %H: 6.68, %N: 11.61
Normalized Intensity: d0 = 0.08%, d1 = 0.04%, d2 = 1.65%, d3 = 98.23%

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of $\pm 2\%$. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

Reviewed By	Reviewed By	C of A Approved By	Test Date	Retest Date
Hanxiang Li	Toni Rantanen	My Nguyen	6/15/2020	6/13/2030
				