Toronto Research Chemicals
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Certificate of Analysis

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1. Identification

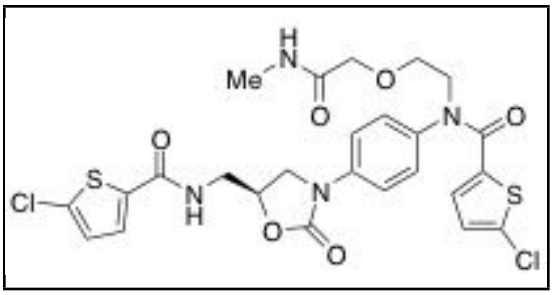
CAS Number:
1807455-76-0

Catalogue Number:
TRC-D296820

Product:
4'-Desmorpholino 4'-[N-(5-chloro-2-carboxy-thienyl) N-(5-Carboxy-3-oxa-pentyl)]amino Rivaroxaban

Synonyms:
5-Chloro-N-[4-[(5S)-5-[[[(5-chloro-2-thienyl)carbonyl]amino]methyl]-2-oxo-3-oxazolidinyl]phenyl]-N-[2-[2-oxo-2-[[[(5S)-2-oxo-3-[4-(3-oxo-4-morpholinyl)phenyl]-5-oxazolidinyl]methyl]amino]ethoxy]ethyl]-2-thiophenecarboxamide;

Structure:



Molecular Formula:
$C_{25}H_{24}Cl_2N_4O_6S_2$

Molecular Weight:
611.52

Source of Product:
Synthetic

2. Analytical Information

Lot Number:
27-JHY-121-1

Melting Point:
79 - 96°C

Appearance of Product:
White Solid

Method for Determining Identity:
^{1}H NMR (DMSO-d_6) and MS

Purity:
98%

99.17% by HPLC

Atmosphere:
Inert Gas

Solubility
Chloroform (Slightly), DMSO (Slightly), Methanol (Very Slightly)

Stability
Hygroscopic

Long Term Storage Condition:
-20°C, Hygroscopic

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

Additional Information:
TLC Conditions: SiO_2; Dichloromethane : Methanol : Ammonium Hydroxide = 9 : 1 : 0.1; Visualized with UV and AMCS; Single Spot, Rf = 0.50.
^{1}H NMR and MS conform to structure.
Elemental Analysis: (Found) %C: 48.34, %H: 3.94, %N: 9.00; (Calculated) %C: 49.10, %H: 3.96, %N: 9.16
Specific Rotation: -41.6° (c = 0.1, Chloroform)

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of ± 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.

Philip Chan, Head of Quality Assurance

QC Test Date
June 6, 2018

Retest Date
June 4, 2022