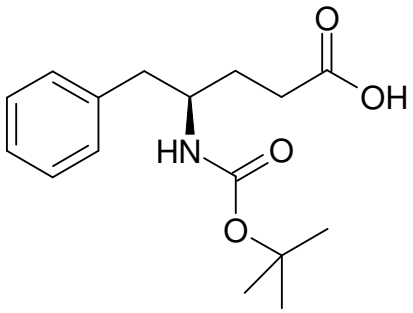
Certificate of Analysis

Chemical Name: (4R)-4-(tert-butoxycarbonylamino)-5-phenyl-pentanoic acid

Chemical Structure:



Formula: $C_{16}H_{23}NO_4$

M.W. [g/mol]: 293.37

Product Work Name	-
ChiroBlock Product Number	-
Version Control Number of Manufacturing Procedure	-
ChiroBlock Lot No.	UDY 4718 w1 III
Date of Lot Manufacturing	01.04.2019
Date of Lot Testing	02.04.2019
Date of Lot Re-testing	02.04.2021

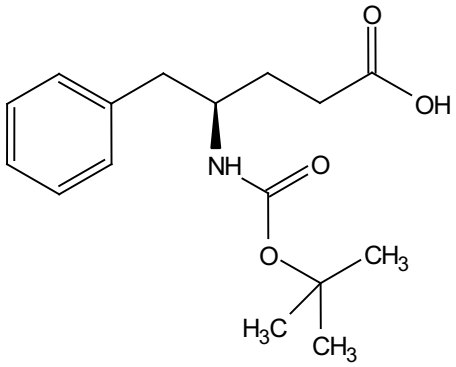
Parameter	Analytical Principle & Method[1]	Specified Result	Experimental Result	Unit
Appearance	Visual inspection	n.a.	white solid	n.a.
Identity	MS (ESI, pos. mode)	conforms to structure	316 [M+Na]+, 194 [MH-BOC]+	m/z
Identity	^{1}H-NMR	conforms to structure	conforms to structure	ppm
Purity	^{1}H-NMR	known impurities < 2	no known impurities	mass-% by integral

Wolfen, 03.04.2019

A. Müller
Quality Control

[1] If the method is not specified in detail, ChiroBlock's standard methods apply (derivable from the analytical raw data [file] referenced in the project records).

UDY 4718 w 1 III
W-27321
1H-NMR
500.13MHz
DMSO



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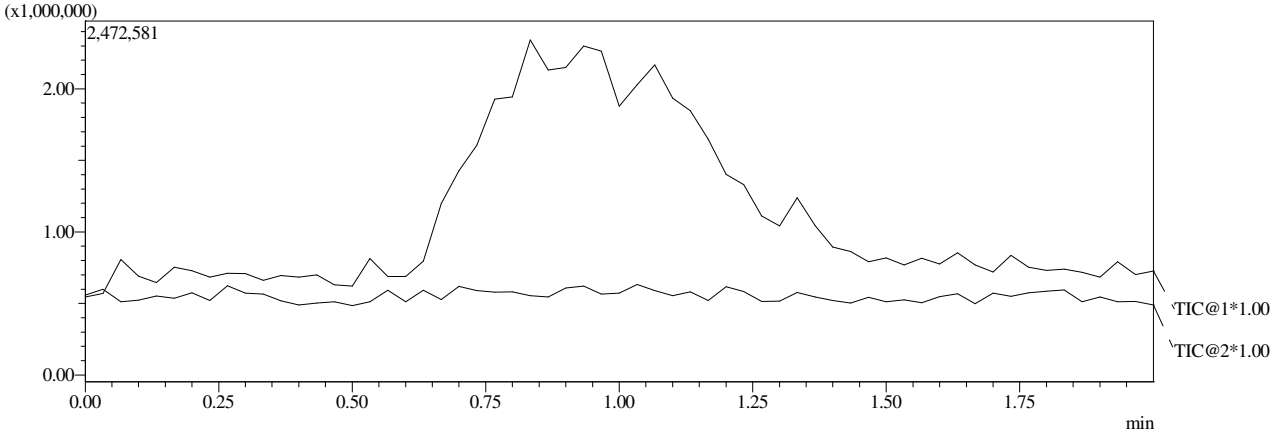
Internal Analysis for QC
MS

Sample Information

UDY 4718 w1 III

Shimadzu CLASS-VP V6.12 SP5 Area % Report
Acquisition Date: 01.04.2019
Method Name: Iso 20%A, 210nm, 0.2ml, M50-2000, -10V + 10V.lcm
Data Name: Z:\Labor\LC\LC-An\LC-An-HPL-02\LC-MS\LC-MS-Läufe\15151-16000LC+LCMS\15151.lcd
Column: direct injection
Eluents: A) H2O B) acetonitrile
Flow rate: 0.2 ml/min
Detection: UV, 210 nm
Probe voltage: +4,5 kV (ESI-positive mode)

MS Chromatogram
Z:\Labor\LC\LC-An\LC-An-HPL-02\LC-MS\LC-MS-Läufe\15151-16000LC+LCMS\15151.lcd



MS Spectrum Graph

#:1 Ret.Time:Averaged 0.667-1.333(Scan#:41-81)
BG Mode:Averaged 0.000-0.529(1-33)
Mass Peaks:1225 Base Peak:315.90(398480) Polarity:Pos Segment1 - Event1