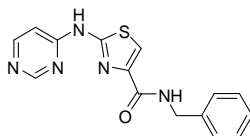




Certificate of Analysis

Axon Catalogue ID: 1535 **Batch Number:** 2
Product Name: Thiazovivin
Alternative Name(s): N.A.
IUPAC Name: N-benzyl-2-(pyrimidin-4-ylamino)thiazole-4-carboxamide

Structure:



Amount:

CAS number: 1226056-71-8
Batch Molecular Formula: C₁₅H₁₃N₅O₂ **Batch MW:** 311.36
Appearance: Off-white Solid **Observed m.p.:** 231°C
TLC (R_f): 0.7 9:1 DCM/MeOH
Chemical Purity: 99.6% **Wavelength for purity check:** 209 nm
Optical Purity (ee):
¹H-NMR (300 MHz): Analytical data confirm chemical structure
Mass Spec: Analytical data confirm chemical structure
Microanalysis: Not available

Storage Conditions: Store at <4°C

Solubility Data:	Solvent	Solubility (mg/ml)	Solubility (mM)	Remarks
	Water			Insoluble
	1eq. NaOH			Insoluble
	1eq. HCl			Not tested
	DMSO	>30	>100	Soluble
	EtOH			Not tested

Remarks:

Quality controller: M. Brandsma, MSc. **Date:** 4/26/2011

The purity of Axon products is confirmed by HPLC, MS, NMR and/or microanalysis. Analytical data are available upon request. Request can be submitted by e-mail to info@axonmedchem.com indicating Axon Catalogue ID and Batch number.

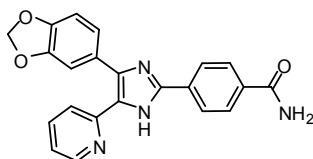
Caution: Not fully tested. For research purposes only



Certificate of Analysis

Axon Catalogue ID: 1661 **Batch Number:** 5
Product Name: SB 431542
Alternative Name(s): N.A.
IUPAC Name: 4-(4-(benzo[d][1,3]dioxol-5-yl)-5-(pyridin-2-yl)-1H-imidazol-2-yl)benzamide

Structure:



Amount:

CAS number: 301836-41-9
Batch Molecular Formula: C₂₂H₁₆N₄O₃ · 1.75H₂O **Batch MW:** 415.91
Appearance: White solid **Observed mp:** 152 - 154 °C
TLC (R_f): 0.35 DCM/MeOH (9:1)
Chemical Purity: 100.0%
Optical Purity (ee):
¹H-NMR (300 MHz): Analytical data confirm chemical structure
Mass Spec: Analytical data confirm chemical structure
Microanalysis: Calculated: C 63.53 , H 4.73 , N 13.47 Found: C 63.38 , H 4.49 , N 13.41
Storage Conditions: Store at +4 °C

Solubility Data:	Solvent	Solubility (mg/ml)	Solubility (mM)	Remarks
	Water	0.0	0.0	Insoluble
	0.1N NaOH (aq)			Not Tested
	0.1N HCl (aq)			Not Tested
	DMSO	38.4	>100 mM	
	EtOH			Not Tested

Remarks:

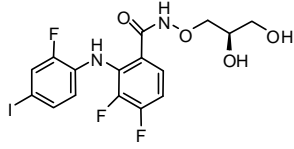
QC Date: 6-5-2014

The purity of Axon Ligands is confirmed by HPLC, MS, NMR and/or microanalysis. Analytical data are available upon request. Request can be submitted by e-mail to info@axonmedchem.com indicating Catalogue ID and Batch number.

Caution: Not fully tested. For research purposes only



Certificate of Analysis

Axon Catalogue ID:	1408	Batch Number:	5																								
Product Name:	PD 0325901																										
Alternative Name(s):	N.A.																										
IUPAC Name:	N-((R)-2,3-Dihydroxy[propoxy]-3,4-difluoro-2-(2-fluoro-4-iodo-phenylamino)-benzamide																										
Structure:		Amount:																									
CAS number:	391210-10-9	MW:	482.19																								
Batch Molecular Formula:	C ₁₆ H ₁₄ F ₃ IN ₂ O ₄	Batch MW:	482.19																								
Appearance:	White solid	Observed mp:	118 - 120 °C																								
TLC (R_f):	0.46 DCM/MeOH (9:1)																										
Chemical Purity:	100.0%																										
Optical Purity (ee):	optically pure																										
¹H-NMR (300 MHz):	Analytical data confirm chemical structure																										
Mass Spec:	Analytical data confirm chemical structure																										
Microanalysis:	C, H, and N fit within 0,4% of theoretical calculation																										
Storage Conditions:	Store at	+4°C																									
Solubility Data:	<table><thead><tr><th>Solvent</th><th>Solubility (mg/ml)</th><th>Solubility (mM)</th><th>Remarks</th></tr></thead><tbody><tr><td>Water</td><td></td><td></td><td>Not Tested</td></tr><tr><td>0.1N NaOH (aq)</td><td></td><td></td><td>Not Tested</td></tr><tr><td>0.1N HCl (aq)</td><td></td><td></td><td>Not Tested</td></tr><tr><td>DMSO</td><td>48.2</td><td>>100 mM</td><td></td></tr><tr><td>EtOH</td><td></td><td></td><td>Not Tested</td></tr></tbody></table>	Solvent	Solubility (mg/ml)	Solubility (mM)	Remarks	Water			Not Tested	0.1N NaOH (aq)			Not Tested	0.1N HCl (aq)			Not Tested	DMSO	48.2	>100 mM		EtOH			Not Tested		
Solvent	Solubility (mg/ml)	Solubility (mM)	Remarks																								
Water			Not Tested																								
0.1N NaOH (aq)			Not Tested																								
0.1N HCl (aq)			Not Tested																								
DMSO	48.2	>100 mM																									
EtOH			Not Tested																								
Remarks:	Microanalysis: Calcd. C 39.85, H 2.93, N 5.81; Found: C 39.39, H 2.95, N 5.60. Pfizer compound; Sold for research purposes under agreement from Pfizer Inc.																										
QC Date:	5/2/2013																										

The purity of Axon products is confirmed by HPLC, MS, NMR and/or microanalysis. Analytical data are available upon request. Request can be submitted by e-mail to info@axonmedchem.com indicating Axon Catalogue ID and Batch number.

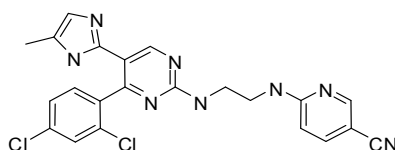
Caution: Not fully tested. For research purposes only



Certificate of Analysis

Axon Catalogue ID: 1386 **Batch Number:** 8
Product Name: CHIR 99021
Alternative Name(s): CT 99021
IUPAC Name: 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(5-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-

Structure:



Amount:

CAS number: 252917-06-9
Batch Molecular Formula: C₂₂H₁₈Cl₂N₈ **Batch MW:** 465.35
Appearance: Off-white solid **Observed mp:** >255 °C (decomp)
TLC (R_f): 0.6 EtOAc/THF (1:1)
Chemical Purity: 99.1%
Optical Purity (ee):
¹H-NMR (300 MHz): Analytical data confirm chemical structure
Mass Spec: Analytical data confirm chemical structure
Microanalysis: Calculated: C 56.78 , H 3.90 , N 24.07 Found: C 56.65 , H 3.70 , N 24.14
Storage Conditions: Store at -20°C

Solubility Data:	Solvent	Solubility (mg/ml)	Solubility (mM)	Remarks
	Water	0.0	0.0	Insoluble
	0.1N NaOH (aq)			Not Tested
	0.1N HCl (aq)			Not Tested
	DMSO	25.0	53.7	Requires warming
	EtOH			Not Tested

Remarks:

QC Date: 4-2-2014

The purity of Axon Ligands is confirmed by HPLC, MS, NMR and/or microanalysis. Analytical data are available upon request. Request can be submitted by e-mail to info@axonmedchem.com indicating Catalogue ID and Batch number.

Caution: Not fully tested. For research purposes only