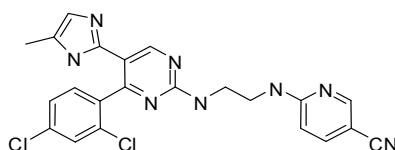


Certificate of Analysis

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.

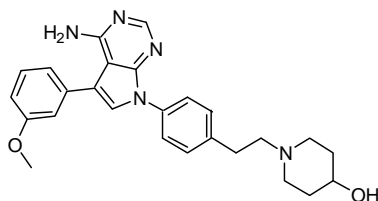
Caution: Not fully tested. For research purposes only



Certificate of Analysis

Axon Catalogue ID: 2097 **Batch Number:** 1
Product Name: CGP 77675
Alternative Name(s): N.A.
IUPAC Name: 1-(amino-5-(3-methoxyphenyl)-7H-pyrrolo[2,3-d]pyrimidin-7-yl)phenethyl)piperidin-4-ol

Structure:



Amount:

CAS number: 234772-64-6
Batch Molecular Formula: C₂₆H₂₉N₅O₂·0.5H₂O **Batch MW:** 452.55
Appearance: Off-white solid **Observed mp:** 171 - 173 °C
TLC (R_f): 0.2 DCM/MeOH (9:1)
Chemical Purity: 98.9%
Optical Purity (ee):
¹H-NMR (300 MHz): Analytical data confirm chemical structure
Mass Spec: Analytical data confirm chemical structure
Microanalysis: Calculated: C 69.00 , H 6.68 , N 15.48 Found: C 68.73 , H 6.33 , N 15.87
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) | 28.0 | 61.9 | |
| | DMSO | 44.4 | >100 mM | |
| | EtOH | | | Not Tested |

Remarks:

QC Date: 8/15/2013

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