

Certificate of Analysis

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Product Name: Ruxolitinib

Catalog No.: 7064

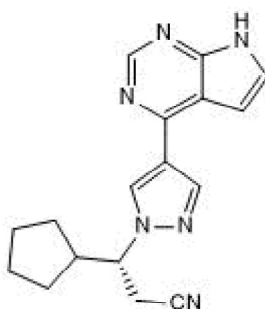
Batch No.: 3

CAS Number: 941678-49-5

IUPAC Name: (3*R*)-3-Cyclopentyl-3-[4-(7*H*-pyrrolo[2,3-*d*]pyrimidin-4-yl)-1*H*-pyrazol-1-yl]propanenitrile

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₈N₆
Batch Molecular Weight: 306.37
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity
Chiral HPLC: Shows 99.4% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 66.65 | 5.92 | 27.43 |
| Found | 66.19 | 5.93 | 27.26 |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Ruxolitinib is a potent and selective JAK1/2 inhibitor (IC₅₀ values are 3.3 and 2.8 nM, respectively). Exhibits selectivity for JAK1/2 over Tyk2 and JAK3 (~6-fold and >130-fold, respectively). Exhibits no significant inhibition against a commercial panel of 26 additional kinases. Inhibits JAK2V617F-mediated signaling and proliferation in Ba/F3 cells and HEL cells. Increases survival rates in a JAK2V617F-driven myeloproliferative neoplasm mouse model. Ruxolitinib has been identified as targeting human host proteins that interact with SARS-CoV-2. The compound can also be used in protocols for the chemical reprogramming of somatic cells to ... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

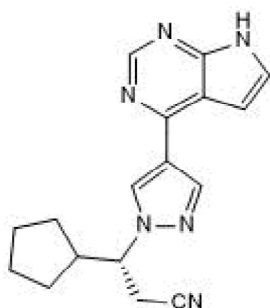
Batch Molecular Formula: C₁₇H₁₈N₆

Batch Molecular Weight: 306.37

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Guan *et al* (2022) Chemical reprogramming of human somatic cells to pluripotent stem cells *Nature* **605** 325. PMID: 35418683.

Gordon *et al* (2020) A SARS-CoV-2-human protein-protein interaction map reveals drug targets and potential drug-repurposing. *Nature* **583**. PMID: 32353859.

Quintás-Cardama *et al* (2010) Preclinical characterization of the selective JAK1/2 inhibitor INCB018424: therapeutic implications for the treatment of myeloproliferative neoplasms. *Blood* **115** 3109. PMID: 20130243.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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