

Store at
-20C
#83405**Ruxolitinib**

5 mg



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For Research Use Only. Not for Use in Diagnostic Procedures.

Background

Ruxolitinib, also known as INCB018424, is a potent and selective ATP-competitive inhibitor of Jak1, Jak2, and Jak3 with an IC₅₀ value of 2.7, 4.5, and 322 nM, respectively (1,2). This small molecule can block IL-6 signaling (IC₅₀ = 281 nM) and proliferation of Jak2^{V617F+} Ba/F3 cells (IC₅₀ = 127 nM) (3). The effect that Ruxolitinib has on Jak-signaling leads to the decreased circulation of the proinflammatory cytokines IL-6 and TNF-α, making it an important compound when studying myeloproliferative neoplasms (MPNs) (3).

This product has applications to SARS-CoV-2 research into the mechanisms of the Novel Coronavirus, which has caused the COVID-19 pandemic.

Molecular Formula

C₁₇H₁₈N₆

Molecular Weight

306.4 g/mol

Purity

>98%

CAS

941678-49-5

Solubility

Soluble in DMSO at 28 mg/ml or ethanol at 15 mg/ml with slight warming.

Storage

Store lyophilized at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 3 months to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use

Ruxolitinib is supplied as a lyophilized powder. For a 15 mM stock, reconstitute 5 mg of powder in 1.09 ml of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References

1. Eghtedar, A. et al. (2012) *Blood* 119, 4614-8.
2. Verstovsek, S. (2009) *Hematology Am Soc Hematol Educ Program*, 636-42.
3. Quintás-Cardama, A. et al. (2010) *Blood* 115, 3109-17.

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