



Ruxolitinib

Data Sheet

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| Catalog Number: | MC11121 | Product Type: | Small Molecule |
| Bio-Activity: | JAK inhibitor | CAS #: | 941678-49-5 |
| Research Categories: | Inflammation, cancer, atherosclerosis | Chemical Name: | β R-Cyclopentyl-4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazole-1-propanenitrile |
| Solubility: | Soluble in DMSO (up to 28 mg/ml) or in Ethanol (up to 15 mg/ml with warming). | Molecular Formula: | C17H18N6 |
| Purity: | > 98% | Molecular Weight: | 306.37 |
| Format: | Powder | Ship Temp: | Ambient |
| Storage: | -20°C | | |

Application Notes

Description/Data:

Potent and selective JAK1&2 inhibitor, IC50s=2.7, 4.5 and 322 nM for JAK1, JAK2 and JAK3 respectively [1]. Blocks IL-6 signaling (IC50=281 nM) and proliferation of JAK2V617F+ Ba/F3 cells (IC50=127 nM) [2]. Inhibits the proinflammatory secretome of senescent cells [3]. The JAK1 S646P mutant is highly sensitive to ruxolitinib [4]. Clinically useful cancer chemotherapeutic.

References:

- 1) Verstovsek et al. (2009), Therapeutic potential of JAK2 inhibitors; Hematology Am. Soc. Hematol. Educ. Program, 2009(1) 636
- 2) Quintas-Cardama et al. (2010), Preclinical characterization of the selective JAK1/2 inhibitor INCB01824: Therapeutic implications for the treatment of myeloproliferative neoplasms; Blood, 115 3109
- 3) Farr et al. (2017) Targeting cellular senescence prevents age-related bone loss in mice; Nat. Med., 23 1072
- 4) Li et al. (2017) Identification of a novel functional JAK1 S646P mutation in acute lymphoblastic leukemia; Oncotarget, 8 34687

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