NEUROMICS

Ruxolitinib Data Sheet

Catalog Number:	MC11121	**Product Type:**	Small Molecule
Bio-Activity:	JAK inhibitor	**CAS #:**	941678-49-5
Research Categories:	Inflammation, cancer, atherosclerosis	**Chemical Name:**	βR-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 forJAK1, 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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