

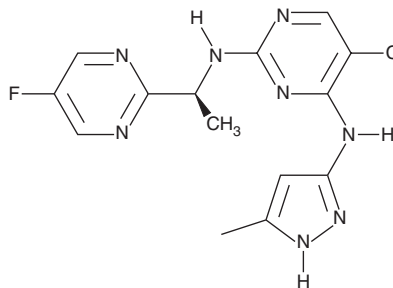
# PRODUCT INFORMATION



## AZD 1480

Item No. 10702

**CAS Registry No.:** 935666-88-9  
**Formal Name:** 5-chloro-N<sup>2</sup>-[(1S)-1-(5-fluoro-2-pyrimidinyl)ethyl]-N<sup>4</sup>-(5-methyl-1H-pyrazol-3-yl)-2,4-pyrimidinediamine  
**MF:** C<sub>14</sub>H<sub>14</sub>ClFN<sub>8</sub>  
**FW:** 348.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 230, 251, 314 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis

### Laboratory Procedures

AZD 1480 is supplied as a crystalline solid. A stock solution may be made by dissolving the AZD 1480 in the solvent of choice, which should be purged with an inert gas. AZD 1480 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of AZD 1480 in these solvents is approximately 50, 25, and 30 mg/ml, respectively.

AZD 1480 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AZD 1480 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. AZD 1480 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Janus-associated kinases (JAKs) are cytoplasmic tyrosine kinases that are required for activating the signaling of certain cytokines and growth factor receptors. Many myeloproliferative diseases have been linked to a mutation in JAK2 where a switch from valine to phenylalanine occurs at the 617 position (V617F).<sup>1</sup> AZD 1480 is a potent JAK2 inhibitor that blocks signaling (IC<sub>50</sub> = 58 nM at 5 mM ATP) and proliferation of JAK2-expressing cell lines (GI<sub>50</sub> = 60 nM).<sup>2,3</sup> It is selective for JAK2 over other JAK family members as well as a panel of related kinases.<sup>3</sup> AZD 1480 also inhibits the growth of cells expressing the V617F mutant of JAK2 (GI<sub>50</sub> = 60 nM).<sup>3</sup> It reversibly blocks JAK2-mediated phosphorylation of STAT3 and STAT5.<sup>3</sup> AZD 1480 displays good pharmacokinetics *in vivo*, inhibits STAT3 and STAT5 activation *in vivo*, and suppresses tumorigenesis in mouse xenografts harboring constitutive STAT3 activity.<sup>2,3</sup> In addition to suppressing myeloma cell growth and survival, AZD 1480 reduces angiogenesis and metastasis *in vitro* and in human xenograft tumor models.<sup>4,5</sup>

### References

1. Gozgit, J.M., Bebernitz, G., Patil, P., *et al. J. Biol. Chem.* **283**(47), 32334-32343 (2008).
2. Hedvat, M., Huszar, D., Herrmann, A., *et al. Cancer Cell* **16**(6), 487-497 (2009).
3. Ioannidis, S., Lamb, M.L., Wang, T., *et al. J. Med. Chem.* (2010).
4. Scuto, A., Krejci, P., Popplewell, L., *et al. Leukemia* **25**(3), 538-550 (2011).
5. Xin, H., Herrmann, A., Reckamp, K., *et al. Cancer Res.* **71**(21), 6601-6610 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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