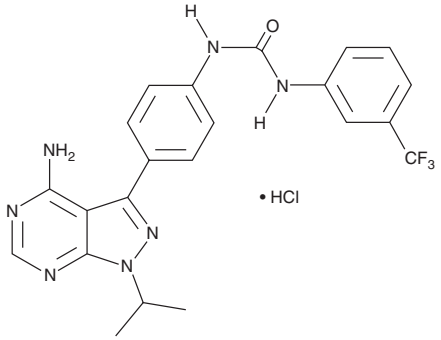
PRODUCT INFORMATION

AD57 (hydrochloride)

Item No. 13975

CAS Registry No.: 2320261-72-9
Formal Name: N-[4-[4-amino-1-(1-methylethyl)-1H-pyrazolo[3,4-d]pyrimidin-3-yl]phenyl]-N'-[3-(trifluoromethyl)phenyl]-urea, monohydrochloride
MF: $C_{22}H_{20}F_3N_7O \bullet HCl$
FW: 491.9
Purity: ≥98%
UV/Vis.: λ_{max}: 203, 271 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

AD57 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the AD57 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. AD57 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of AD57 (hydrochloride) in these solvents is approximately 5, 10, and 14 mg/ml, respectively.

AD57 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AD57 (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. AD57 (hydrochloride) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method.We do not recommend storing the aqueous solution for more than one day.

Description

Complex diseases, like cancer, may best be countered by compounds that affect multiple targets. AD57 is a polypharmacological cancer therapeutic, in that it is designed to modulate multiple targets related to cancer.[1] In *Drosophila*, it potently inhibits the receptor tyrosine kinase RET (IC_{50} = 2 nM) and reduces the activity of numerous other kinases by more than 80% when given at 1 µM.[1] Most notably, AD57 interferes with kinases downstream of RET, including Src, Raf, and S6K, providing further efficacy in preventing signaling leading to invasion, proliferation, and metabolism relevant to cancer.[1]

Reference

1. Dar, A.C., Das, T.K., Shokat, K.M., *et al.* Chemical genetic discovery of targets and anti-targets for cancer polypharmacology. *Nature* **486(7401)**, 80-84 (2012).

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