

PRODUCT INFORMATION



ITF 2357

Item No. 11045

CAS Registry No.: 732302-99-7

Formal Name: N-[4-[(hydroxyamino)carbonyl]phenyl]-carbamic acid, [6-[(diethylamino)methyl]-2-naphthalenyl]methyl ester, monohydrochloride, monohydrate

MF: $C_{24}H_{27}N_3O_4 \cdot HCl [H_2O]$

FW: 476.0

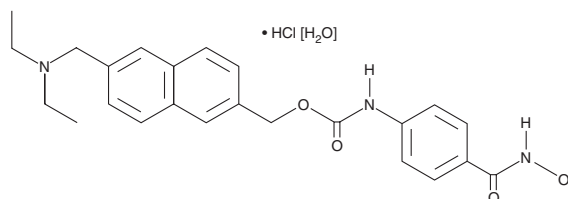
Purity: $\geq 98\%$

UV/Vis.: λ_{max} : 228, 265 nm

Supplied as: A crystalline solid

Storage: $-20^\circ C$

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

ITF 2357 is supplied as a crystalline solid. A stock solution may be made by dissolving the ITF 2357 in the solvent of choice. ITF 2357 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ITF 2357 in ethanol is approximately 2 mg/ml and approximately 30 mg/ml in DMSO and DMF.

ITF 2357 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ITF 2357 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ITF 2357 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ITF 2357 inhibits class I and class II histone deacetylases (maize HDACs: HD2, HD-1B, and HD-1A with $IC_{50}s = 7.5-16$ nM) and reduces the production of several pro-inflammatory cytokines including TNF α , IL-1 α , and IL-1 β ($IC_{50}s = 10-22$ nM).¹ ITF 2357 also has activity against cells expressing janus kinase 2 (JAK2)^{V617F} ($IC_{50}s = 1-10$ nM), a mutated form of the JAK2 enzyme that is implicated in the pathophysiology of many myeloproliferative diseases, including polycythaemia vera.²

References

1. Leoni, F., Fossati, G., Lewis, E.C., *et al.* The histone deacetylase inhibitor ITF2357 reduces production of pro-inflammatory cytokines *in vitro* and systemic inflammation *in vivo*. *Mol. Med.* **11(1-12)**, 1-15 (2005).
2. Guerini, V., Barbui, V., Spinelli, O., *et al.* The histone deacetylase inhibitor ITF2357 selectively targets cells bearing mutated JAK2^{V617F}. *Leukemia* **22**, 740-747 (2008).

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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