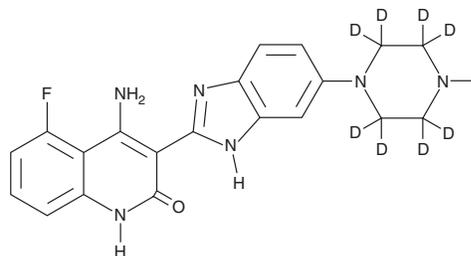


PRODUCT INFORMATION



Dovitinib-d₈ Item No. 28706

CAS Registry No.: 1246819-84-0
Formal Name: 4-amino-5-fluoro-3-(6-(4-methylpiperazin-1-yl)-2,2,3,3,5,5,6,6-d₈)-1H-benzo[d]imidazol-2-yl)quinolin-2(1H)-one
MF: C₂₁H₁₃D₈FN₆O
FW: 400.5
Chemical Purity: ≥98% (Dovitinib)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Dovitinib-d₈ is intended for use as an internal standard for the quantification of dovitinib (Item No. 15220) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Dovitinib-d₈ is supplied as a solid. A stock solution may be made by dissolving the dovitinib-d₈ in the solvent of choice, which should be purged with an inert gas. Dovitinib-d₈ is soluble in the organic solvent DMSO. Dovitinib-d₈ is also soluble in a 1:1 solution of acetonitrile:methanol.

Description

Dovitinib is a multi-kinase inhibitor.¹ It inhibits the receptor tyrosine kinases FLT3, CSF1R, and c-Kit (IC₅₀s = 1, 36, and 2 nM, respectively), as well as FGFR1, FGFR3, VEGFR1-3, PDGFRα, and PDGFRβ (IC₅₀s = 8, 9, 10, 13, 8, 27, and 210 nM, respectively). Dovitinib inhibits proliferation of human multiple myeloma cell lines expressing mutant, but not wild-type, FGFR3 (IC₅₀s = 90-550 and >2,500 nM, respectively). It decreases FGF-induced ERK1/2 phosphorylation and induces apoptosis in patient-derived multiple myeloma cells when used at a concentration of 500 nM. Dovitinib (3-300 mg/kg for eight days) inhibits bFGF-induced angiogenesis in a Matrigel™ plug assay in mice.² It reduces tumor growth in KM12L4A colon, DU145 prostate, and MV4-11 acute myelogenous leukemia mouse xenograft models with ED₅₀ values of 17, 23, and 3 mg/kg per day, respectively.

References

1. Trudel, S., Li, Z.H., Wei, E., *et al.* CHIR-258, a novel, multitargeted tyrosine kinase inhibitor for the potential treatment of t(4;14) multiple myeloma. *Blood* **105**(7), 2941-2948 (2005).
2. Renhowe, P.A., Pecchi, S., Shafer, C.M., *et al.* Design, structure-activity relationships and in vivo characterization of 4-amino-3-benzimidazol-2-ylhydroquinolin-2-ones: A novel class of receptor tyrosine kinase inhibitors. *J. Med. Chem.* **52**(2), 278-292 (2009).

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.

WARRANTY AND LIMITATION OF REMEDY

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