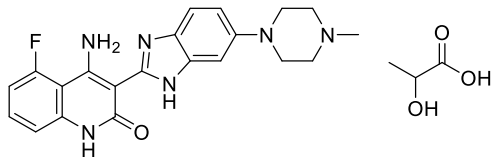


Product data sheet



MedKoo Cat#: 581837 Name: Dovitinib Dilactic acid CAS: 852433-84-2 Chemical Formula: C ₂₄ H ₂₇ FN ₆ O ₄ Exact Mass: 482.2078 Molecular Weight: 482.5164		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Dovitinib is a small-molecule multitargeted receptor tyrosine kinase inhibitor, which inhibits Ba/F3 cells transformed to IL3 independence by ZNF198-FGFR1 or BCR-FGFR1 with IC₅₀ values of 150 nM and 90 nM, respectively.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.07 mL	10.36 mL	20.72 mL
5 mM	0.41 mL	2.07 mL	4.14 mL
10 mM	0.21 mL	1.04 mL	2.07 mL
50 mM	0.04 mL	0.21 mL	0.41 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Das A, Martinez Santos JL, Alshareef M, Porto GBF, Infinger LK, Vandergrift WA 3rd, Lindhorst SM, Varma AK, Patel SJ, Cachia D. In Vitro Effect of Dovitinib (TKI258), a Multi-Target Angiokinase Inhibitor on Aggressive Meningioma Cells. Cancer Invest. 2020 Jul;38(6):349-355. doi: 10.1080/07357907.2020.1773844. Epub 2020 Jun 8. PMID: 32441531.

2. AlRabiah H, Kadi AA, Aljohar HI, Attwa MW, Al-Shakliah NS, Attia SM, Mostafa GA. A New Validated HPLC-MS/MS Method for Quantification and Pharmacokinetic Evaluation of Dovitinib, a Multi-Kinase Inhibitor, in Mouse Plasma. Drug Des Devel Ther. 2020 Jan 28;14:407-415. doi: 10.2147/DDDT.S223573. PMID: 32095071; PMCID: PMC6995292.

In vivo study

1. Kähkönen TE, Tuomela JM, Grönroos TJ, Halleen JM, Ivaska KK, Härkönen PL. Dovitinib dilactic acid reduces tumor growth and tumor-induced bone changes in an experimental breast cancer bone growth model. J Bone Oncol. 2019 Mar 19;16:100232. doi: 10.1016/j.jbo.2019.100232. PMID: 30956945; PMCID: PMC6434100.

2. Yadav SS, Li J, Stockert JA, Herzog B, O'Connor J, Garzon-Manco L, Parsons R, Tewari AK, Yadav KK. Induction of Neuroendocrine Differentiation in Prostate Cancer Cells by Dovitinib (TKI-258) and its Therapeutic Implications. Transl Oncol. 2017 Jun;10(3):357-366. doi: 10.1016/j.tranon.2017.01.011. Epub 2017 Mar 24. PMID: 28342996; PMCID: PMC5369368.

Product data sheet



7. Bioactivity

Biological target:

Dovitinib is a small-molecule multitargeted receptor tyrosine kinase inhibitor.

In vitro activity

Treatment of CH157MN and IOMM-Lee cells with Dovitinib suppressed multiple angiokineses-mainly FGFRs, leading to suppression of downstream signaling by RAS-RAF-MAPK molecules and PI3K-AKT molecules which are involved in cell proliferation, cell survival, and tumor invasion. Furthermore, Dovitinib induced apoptosis via downregulation of survival proteins (Bcl-XL), and over-expression of apoptotic factors (Bax and caspase-3) regardless of CHEK2 and NF2 mutation status.

Reference: Cancer Invest. 2020 Jul;38(6):349-355. <https://pubmed.ncbi.nlm.nih.gov/32441531/>

In vivo activity

The effects of an FGFR inhibitor, dovitinib dilactic acid (TKI258) on tumor growth and tumor-induced bone changes were evaluated. Cancer-induced bone lesions were smaller in dovitinib-treated mice as evaluated by X-ray imaging. Peripheral quantitative computed tomography imaging showed higher total and cortical bone mineral content and cortical bone mineral density in dovitinib-treated mice, suggesting better preserved bone mass.

Reference: J Bone Oncol. 2019 Mar 19;16:100232. <https://pubmed.ncbi.nlm.nih.gov/30956945/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.