# Dubermatinib

**Cat. No.:** HY-12963

**CAS No.:** 1341200-45-0

**Molecular Formula:** $C_{24}H_{30}ClN_7O_2S$

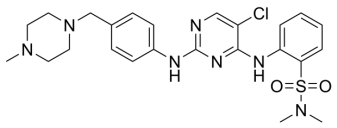
**Molecular Weight:** 516.06

**Target:** TAM Receptor; Apoptosis

**Pathway:** Protein Tyrosine Kinase/RTK; Apoptosis

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 1 year |
| | -20°C | 6 months |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 2 mg/mL (3.88 mM; ultrasonic and warming and heat to 60°C)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 1.9378 mL | 9.6888 mL | 19.3776 mL |
| | 5 mM | --- | --- | --- |
| | 10 mM | --- | --- | --- |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: 0.5% CMC-Na/saline water
   Solubility: 10 mg/mL (19.38 mM); Suspended solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

Dubermatinib (TP-0903) is a potent and selective Axl receptor tyrosine kinase inhibitor with an $IC_{50}$ value of 27 nM.

**$IC_{50}$ & Target**

IC50: 27nM (Axl)[1]

**In Vitro**

Dubermatinib (TP-0903) displays a potent activity against AXL with an $IC_{50}$ of 0.027 μM. Dubermatinib (TP-0903) shows extremely potent activity in cell viability assays with an $IC_{50}$ of 6 nM against the pancreatic cancer cell line PSN-1. Dubermatinib (TP-0903) is evaluated for its ability to block GAS6-mediated activation of AXL in pancreatic cancer cells. PSN-1 cells are serum-starved and then stimulated with GAS6 in the presence of various concentrations of TP-0903[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## PROTOCOL

**Cell Assay** [1]

For cell proliferation assays, 45 µL containing 1000 cells per well are seeded into solid white 384-well plates in appropriate media. The following day, Dubermatinib (TP-0903) is diluted in serum free growth media to 10x desired concentrations and 5 µL is added to each well. Combined compound and cells are incubated for 96 hours. Following incubation, 40 µL of ATP-Lite solution is added to each well, incubated for an additional 10 minutes at room temperature and luminescence is measured on an microplate reader[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- J Transl Med. 2023 Dec 8;21(1):890.
- Sci Rep. 2024 Jan 3;14(1):425.
- Neurochem Res. 2021 Jan 2.
- Mol Pain. Jan-Dec 2020;16:1744806919900814.
- bioRxiv. 2023 May 31.

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## REFERENCES

[1]. Mollard A, et al. Design, Synthesis and Biological Evaluation of a Series of Novel Axl Kinase Inhibitors. ACS Med Chem Lett. 2011 Dec 8;2(12):907-912.



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