SZABO SCANDIC

Part of Europa Biosite

# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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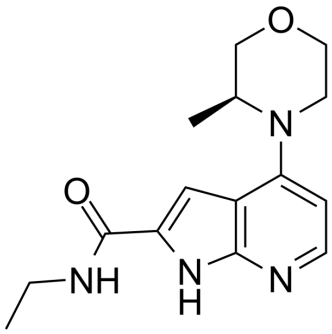
# BAY-707

| | |
|---|---|
| **Cat. No.:** | HY-112081 |
| **CAS No.:** | 2109805-96-9 |
| **Molecular Formula:** | $C_{15}H_{20}N_4O_2$ |
| **Molecular Weight:** | 288.34 |
| **Target:** | DNA/RNA Synthesis |
| **Pathway:** | Cell Cycle/DNA Damage |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 100 mg/mL (346.81 mM; Need ultrasonic)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 3.4681 mL | 17.3406 mL | 34.6813 mL |
| 5 mM | 0.6936 mL | 3.4681 mL | 6.9363 mL |
| 10 mM | 0.3468 mL | 1.7341 mL | 3.4681 mL |

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.67 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.67 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.67 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

BAY-707 is a substrate-competitive, highly potent and selective inhibitor of MTH1(NUDT1) with an $IC_{50}$ of 2.3 nM. BAY-707 has a good pharmacokinetic (PK) profile to other MTH1 compounds and is well-tolerated in mice, but shows a clear lack of in vitro or in vivo anticancer efficacy[1].

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

IC50:2.3 nM (MTH1/NUDT1)[1]

**In Vitro**

BAY-707 demonstrates a superior cellular target engagement with an $EC_{50}$ of 7.6 nM, in agreement with its higher enzymatic

| | |
|---|---|
| | potency ($IC_{50}$=2.3 nM)[1].<br>BAY-707 demonstrates a high cell permeability cell permeability in the Caco-2 assay with a efflux ratio of 288 nm/s[1].<br>BAY-707 shows an overall favorable physicochemical profile and promising in vitro pharmacokinetic properties with high metabolic stability in both human microsomes(0.29L/h/kg,$F_{max}$=78%) and rat hepatocytes (0.54L/h/kg,$F_{max}$=87%) [1].<br>BAY-707 (0-30 μM; 24 hours) has no antiproliferative effects in HMEC, HeLa and SW-480 cells[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| **In Vivo** | Bay-077 (orally adminstation; 50-250 mg/kg; 2 weeks) exhibits superior biochemical potency, cellular target engagement, and a pharmacokinetic profile to other MTH1 tool compounds, But Bay-077 exerts no anticancer efficacy either in mono- or in combination therapies in CT26 and NCI-H460 mice model[1].<br>BAY-707 (orally adminstation; 50-250 mg/kg; 2 weeks) is well-tolerated in nude mice, after 7-days treatment, body weight loss does not exceed 10% [1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES

[1]. Ellermann M, et al. Novel Class of Potent and Cellularly Active Inhibitors Devalidates MTH1 as Broad-Spectrum Cancer Target.ACS Chem Biol. 2017 Aug 18;12(8):1986-1992.



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