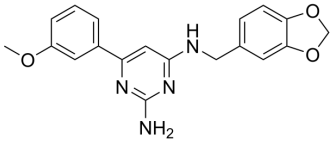
BML-284

Cat. No.:	HY-19987
CAS No.:	853220-52-7
Molecular Formula:	$C_{19}H_{18}N_4O_3$
Molecular Weight:	350.37
Target:	Wnt
Pathway:	Stem Cell/Wnt

Storage:

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (285.41 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.8541 mL	14.2706 mL	28.5413 mL
5 mM	0.5708 mL	2.8541 mL	5.7083 mL
10 mM	0.2854 mL	1.4271 mL	2.8541 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: ≥ 2.08 mg/mL (5.94 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.94 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.94 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BML-284 is a potent and cell-permeable Wnt signaling activator. BML-284 induces TCF-dependent transcriptional activity with an EC_{50} of 700 nM[1].

IC_{50} & Target

EC50: 700 nM (TCF-dependent transcriptional activity)[1]

In Vitro

BML-284 (10 μM; 24 hours) significantly increases the migration and invasion of both MNK45 and AGS cells and partially

restores the migratory and invasive abilities of cells inhibited by pizotifen (HY-B0115)[1].
BML-284 (10 μM; 24 hours) induces the expression of β-catenin significantly when compared with the NC group. It also partially reverses the effects induced by pizotifen on E-cadherin and N-cadherin expression in MNK45 and AGS cells compared with the pizotifen-treated group[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	Human gastric cancer cell lines MNK45 and AGS[1]
Concentration:	10 μM
Incubation Time:	24 hours
Result:	Induced β-catenin expression and reserved E-cadherin and N-cadherin expression in MNK45 and AGS cells.

In Vivo

BML-284 (10 ng) combines with Pyrimethanil (4 mg/L) could partially rescue the malformed phenotype and cardiac defects induced by Pyrimethanil in Tg (myl7:EGFP) transgenic embryos at 5.5 hpf are transferred into plates with 20 embryos[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Hazard Mater. 2023 Apr 15.
- Proc Natl Acad Sci U S A. 2021 Jan 12;118(2):e2009539118.
- Sci Total Environ. 2022 Feb 25;809:152102.
- Chemosphere. 2020 Sep;255:126889.
- Cell Death Discov. 2023 Aug 25;9(1):312.

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REFERENCES

[1]. Liu J, et al. A small-molecule agonist of the Wnt signaling pathway. Angew Chem Int Ed Engl. 2005 Mar 18;44(13):1987-90.

[2]. Ying Jiang, et al. Pizotifen inhibits the proliferation and invasion of gastric cancer cells. Exp Ther Med. 2020 Feb;19(2):817-824.

[3]. Yunlong Meng, et al. Exposure to pyrimethanil induces developmental toxicity and cardiotoxicity in zebrafish. Chemosphere. 2020 Sep;255:126889.

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