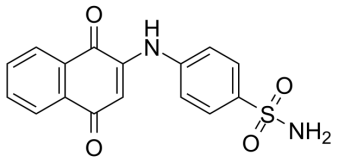
ML329

Cat. No.:	HY-101464
CAS No.:	19992-50-8
Molecular Formula:	$C_{16}H_{12}N_2O_4S$
Molecular Weight:	328.34
Target:	Others
Pathway:	Others
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 : 5 mg/mL (15.23 mM; Need ultrasonic)
DMF : 5 mg/mL (15.23 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0456 mL	15.2281 mL	30.4562 mL
	5 mM	0.6091 mL	3.0456 mL	6.0912 mL
	10 mM	0.3046 mL	1.5228 mL	3.0456 mL

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: 5 mg/mL (15.23 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

ML329 is a micropthalmia-associated transcription factor (MITF) inhibitor, which inhibits TRPM-1 promoter activity with an IC_{50} of 1.2 μM.

IC_{50} & Target

IC50: 1.2 μM (TRPM-1)[1]

In Vitro

ML329 inhibits the expression of numerous micropthalmia-associated transcription factor (MITF) target genes and blocks the proliferation of numerous cell lines that require MITF for proliferation. ML329 could directly or indirectly interact with MITF or components of the MITF regulatory network. As a transcription factor that regulates cell cycle and pigmentation, interference of MITF with ML329 will be useful in characterizing the specific roles of MITF in melanoma and validate blockade of MITF function as a potential treatment of melanoma. ML329 shows specific activity against the MITF-dependent cells, primary melanocytes but no effect on the viability in A375 cells. ML329 reduces the expression of multiple MITF target genes,

including pigment-related genes and the cell cycle regulator CDK2. As a tool compound, ML329 will be useful in elucidating the role of MITF in melanocyte lineage development and in melanoma disease progression[1].

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

CUSTOMER VALIDATION

- Nat Commun. 2021 Jan 13;12(1):362.
- Clin Transl Med. 2022 Jul;12(7):e961.
- Br J Dermatol. 2021 Jan 5.
- Br J Cancer. 2023 Mar 23.
- Cancer Biol Med. 2019 Aug;16(3):498-513.

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REFERENCES

[1]. Faloon PW, et al. A Small Molecule Inhibitor of the MITF Molecular Pathway. Probe Reports from the NIH Molecular Libraries Program [Internet]. Bethesda (MD): National Center for Biotechnology Information (US); 2010-2012 Dec 13.

Caution: Product has not been fully validated for medical applications. For research use only.

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