BTYNB

Cat. No.: HY-124447

CAS No.: 304456-62-0

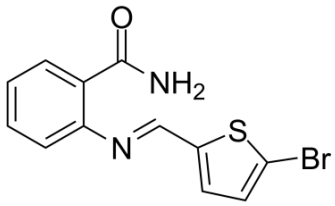
Molecular Formula: $C_{12}H_9BrN_2OS$

Molecular Weight: 309.18

Target: Others

Pathway: Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (202.15 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2344 mL	16.1718 mL	32.3436 mL
	5 mM	0.6469 mL	3.2344 mL	6.4687 mL
	10 mM	0.3234 mL	1.6172 mL	3.2344 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 (8.09 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.09 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.09 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BTYNB is a potent and selective inhibitor of IMP1 binding to c-Myc mRNA (IC_{50}=5 μM). BTYNB exhibits selectivity and effectiveness against IMP1-postive cancer cell lines. BTYNB can be used for cancer research[1].

IC_{50} & Target

IC50: 5 μM (IMP1 c-Myc mRNA internation)[1]

In Vitro

The oncofetal mRNA-binding protein, IMP1 binds to and stabilizes c-Myc, β-TrCP1, and other oncogenic mRNAs, it leads to increased expression of the proteins encoded by its target mRNAs[1].
BTYNB (10 uM; 0.5-1 hour) enhances the degradation rate of c-Myc mRNA in SK-MEL2 cells[1].
BTYNB (10-40 uM; 72 hours) degrades c-Myc expression in a dose-dependent manner in SK-MEL2 cells[1].

BTYNB (10-40 uM; 72 hours) decreases IMP1 expression in a dose-dependent manner in SK-MEL2 cells[1].
BTYNB (1-40 μM; 72 hours) decreases levels of CDC34, CALM1, β-TRCP1, and Col5A1 mRNAs expression in T47D/(A1-2) cells in the presence of hormone[1].
BTYNB elicits a robust dose-dependent inhibition of cell proliferation in IMP1-positive cells with IC_{50} of 2.3 μM, 3.6 μM, and 4.5 μM in ES-2, IGROV-1, and SK-MEL2 cells, respectively. BTYNB has no effects on IMP1-negative cells and demonstrates no inhibition of cell proliferation at all concentrations tested, including 50 μM[1].

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

RT-PCR[1]

Cell Line:	T47D/(A1-2) cells
Concentration:	1 μM; 10 μM; 20 μM; 30 μM; 40 μM
Incubation Time:	
Result:	Reduced the levels of a diverse set of cancer-related IMP1 mRNA targets.

REFERENCES

[1]. Lily Mahapatra,et al. A Novel IMP1 Inhibitor, BTYNB, Targets c-Myc and Inhibits Melanoma and Ovarian Cancer Cell Proliferation. Transl Oncol

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