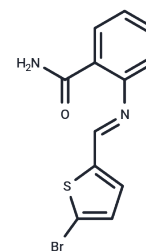


BTYNB

Chemical Properties

CAS No. : 304456-62-0
 Formula: C₁₂H₉BrN₂O₅
 Molecular Weight: 309.18
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	BTYNB (MDK6620) is an inhibitor of the oncofetal mRNA-binding protein IMP1 (IC ₅₀ = 5 μM for IMP1 binding to c-Myc mRNA). MDK6620 downregulates β-TrCP1 mRNA and reduces activation of nuclear transcriptional factors-kappa B (NF-κB). It disrupts this enhancer function by impairing IGF2 mRNA-binding protein 1 (IGF2BP1)-RNA association
Targets(IC ₅₀)	NF-κB,c-Myc
In vitro	In cells, BTYNB downregulates several mRNA transcripts regulated by IMP1. BTYNB destabilizes c-Myc mRNA, resulting in downregulation of c-Myc mRNA and protein. BTYNB downregulates β-TrCP1 mRNA and reduces activation of nuclear transcriptional factors-kappa B (NF-κB). The oncogenic translation regulator, eEF2, emerged as a new IMP1 target mRNA, enabling BTYNB to inhibit tumor cell protein synthesis. BTYNB potentially inhibited proliferation of IMP1-containing ovarian cancer and melanoma cells with no effect in IMP1-negative cells. Overexpression of IMP1 reversed BTYNB inhibition of cell proliferation. BTYNB completely blocked anchorage-independent growth of melanoma and ovarian cancer cells in colony formation assays. With its ability to target c-Myc and to inhibit proliferation of difficult-to-target melanomas and ovarian cancer cells, and with its unique mode of action, BTYNB is a promising small molecule for further therapeutic evaluation and mechanistic studies[1].

Solubility Information

Solubility	DMSO: 70 mg/mL (226.41 mM),Sonication is recommended. Ethanol: 4 mg/mL (12.94 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.47 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0647 mL	0.3234 mL	0.6469 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Mahapatra L , Andruska N , Mao C , et al. A Novel IMP1 Inhibitor, BTYNB, Targets c-Myc and Inhibits Melanoma and Ovarian Cancer Cell Proliferation[J]. Translational Oncology, 2017, 10(5):818-827.

Simon M , Nadine B , Bianca B , et al. The oncofetal RNA-binding protein IGF2BP1 is a druggable, post-transcriptional super-enhancer of E2F-driven gene expression in cancer[J]. Nucleic Acids Research, 2020(15):15.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481