

TBK1/IKK ϵ -IN-4

Chemical Properties

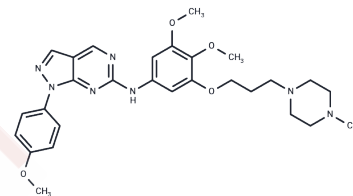
CAS No. : 1381930-17-1

Formula: C₂₈H₃₅N₇O₄

Molecular Weight: 533.62

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	TBK1/IKK ϵ -IN-4, a 6-aminopyrazolopyrimidine derivative, serves as a potent, selective inhibitor for TBK1 and IKK ϵ , demonstrating IC ₅₀ values of 13 nM and 59 nM, respectively. This compound exhibits significantly reduced activity, by 100- to 1000-fold, against other protein kinases, such as PDK1, PI3K family members, and mTOR[1].
Targets(IC ₅₀)	Others, I κ B/IKK
In vitro	TBK1/IKK ϵ -IN-4 (Compound II; 96 hours; A549 and HCC44 cells) demonstrates selective toxicity in TBK1-dependent cancer cell lines (IC ₅₀ of ~4.2 μ M for H441 cells and IC ₅₀ of ~0.4 μ M for A549 cells)[1]. TBK1/IKK ϵ -IN-4 (Compound II; 0-2 μ M; 30 minutes; HCC44 cells) inhibits AKT activity[1]. TBK1/IKK ϵ -IN-4 (Compound II) inhibits LPS-induced expression of IFN β (IC ₅₀ = 62 nM) and the IFN β target genes IP10 (IC ₅₀ = 78 nM) and Mx1 (IC ₅₀ = 20 nM). It effectively blocks TLR3-dependent IRF3 nuclear translocation (IC ₅₀ < 100 nM) without impairing TNFR1-dependent p65 NF κ B nuclear translocation at doses up to 20 μ M[1].

Solubility Information

Solubility	DMSO: 70 mg/mL (131.18 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: 3.3 mg/mL (6.18 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	1.874 mL	9.370 mL	18.7399 mL
5 mM	0.3748 mL	1.874 mL	3.748 mL
10 mM	0.1874 mL	0.937 mL	1.874 mL
50 mM	0.0375 mL	0.1874 mL	0.3748 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

Ou YH, et al. TBK1 directly engages Akt/PKB survival signaling to support oncogenic transformation. Mol Cell. 2011 Feb 18;41(4):458-70.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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